

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1672.—Vol. XXXVII.

LONDON, SATURDAY, SEPTEMBER 7, 1867.

{ STAMPED ...SIXPENCE  
{ UNSTAMPED...FIVEPENCE

**MR. JAMES CROFTS, STOCK AND SHAREBROKER,**  
No. 1, FINCH LANE, CORNHILL.  
(Established 24 years.)

PRINCE OF WALES shares are declining in market value, apparently without adequate cause. At the decline Mr. CROFTS strongly recommends purchases for investment, there being no vital change in the ultimate prospects of the mine. Shares recommended for immediate purchase are CHIVERTON MOOR, NORTH CROFTY, EAST LOVELL, GREAT LAXEY, GREAT VOR, MARKE VALLEY, SOUTH FRANCES, WEST CARADON, WEST CHIVERTON, PROVIDENCE, HERODSFOOT, EAST CARADON, WHEAL SETON, EAST BASSET, and PRINCE OF WALES. Mr. CROFTS is also a BUYER of all the above at full market prices. Business in the shares of the LILY QUARRIES (Pembrokeshire), on the merits of which copious details can be given. These quarries are estimated to be returning the largest profits of any recently opened. BUYER of 100 shares Okel Tor, at 6s. 6d. per share net. SELLER of 20 East Rosewarne and 30 Rosewarne United, all calls paid, for £6 5s. net cash.

Bankers: National Bank of Scotland, Finch-lane.

**WILLIAM LANE, 44, THREADNEEDLE STREET,**  
LONDON, E.C. STOCK AND SHAREDEALER (Established Thirty Years), has FOR SALE the following SHARES:—  
25 Chiverton Moor, £5 13  
25 Chontales, £5 6s. 3d.  
15 Chiverton, £7.  
15 Don Pedro, £2 14s.  
15 East Lovell, £7 1/4.  
20 East Grenville, 40s.  
20 East Caradon, £5 1/2.  
20 East Caradon, £5 1/2 (call paid).  
SPECIAL BUSINESS as BUYER or SELLER in North Trekerby, Marke Valley, East Caradon, Don Pedro North del Rey, Great Laxey, and Herodsfoot, either for cash or fortnightly settlement.

**GUIDE TO INVESTORS.—MR. LELAND'S STOCK, SHARE, AND FINANCE REGISTER** for September, contains an analysis of the financial statements of all the joint-stock companies that have been issued during the month of August, with their dividends, and such information as is necessary to guide intending investors. 6d. per copy, or 5s. annually, post free. Published by Mr. BAKER LELAND, at his offices, 11, Royal Exchange, London.

**MR. WILLIAM WARD,**  
STOCK AND SHAREDEALER.  
No. 29, THREADNEEDLE STREET, LONDON, E.C.

**MR. JOHN BATTERS, STOCK AND MINING SHAREBROKER,** 15, THROGMORTON STREET, LONDON, E.C.

**MR. WILLIAM SEWARD, STOCK AND SHAREDEALER,** 19, THROGMORTON STREET, LONDON, E.C.

**MESSRS. WARD AND JACKMAN,**  
STOCK AND SHAREDEALERS.  
CUSHION COURT, OLD BROAD STREET, CITY, E.C.  
Messrs. WARD and JACKMAN are DEALERS in every description of mining properties at close market prices, either for immediate settlement or the fortnightly account.  
Bankers: London and Westminster, Lothbury.

**MR. THOMAS THOMPSON, MINING OFFICE,** 12, OLD JEWRY CHAMBERS, LONDON, E.C.

**MESSRS. WILSON, WARD, AND CO.,**  
SHAREDEALERS.  
16, UNION COURT, OLD BROAD STREET, LONDON, E.C.  
BUYERS of any number of Frontino and Bolivia, and New Great Consols, shares at full market price. A special report upon New Great Consols Mine can be had on application, post free.  
Attention is directed to the report of East St. Just Mines, inserted in this week's Journal. These shares should be bought at present prices. The mines are returning nearly £12,000 worth of tin annually, and a great improvement has taken place in the lode at the engine-shaft.

**MR. G. D. SANDY, STOCK AND SHAREDEALER,**  
No. 48, THREADNEEDLE STREET, LONDON, E.C., TRANSACTS BUSINESS IN EVERY DESCRIPTION OF STOCK EXCHANGE SECURITIES, MINING AND FINANCIAL ENTERPRISES, at close market prices. Correct Daily Price List may be had on application. Money advanced to any amount on legitimate stocks and shares. References exchanged.

**JOHN RISLEY, STOCK AND SHAREBROKER**  
(SWORN BROKER).  
48, THREADNEEDLE STREET, LONDON, E.C.  
Bankers: London and Westminster, Lothbury.

**MR. JAMES HUME, 74, OLD BROAD STREET,**  
MEMBER OF THE MINING EXCHANGE, LONDON.  
TRANSACTS BUSINESS in all description of railway stocks, mine shares, and miscellaneous securities, at net prices, and at margins of 1 1/4 per cent. on mine shares, and 3/4 per cent. on railway shares.  
Has BUSINESS in Chontales, Pestarena, Don Pedro, Anglo-Brazilian Gold; also in East Bassett, East Russell, Prince of Wales, Crebhor, South Condurrow, Chiverton Moor, Chiverton, West Chiverton, Clifford, and all other Mines, Railways, and miscellaneous shares.  
EAST CHIVERTON is recommended by Mr. HUME on its merits and prospects of early success. Particulars on application.  
A well selected list of good shares, dividend and progressive, likely to rise during the next few months, can be supplied.  
Bankers: The London Joint Stock Bank.

**MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S,**  
BISHOPSGATE STREET, LONDON, E.C. (Established 13 years), has FOR SALE the FOLLOWING SHARES, at net prices:—  
1 Wheal Seton, £115.  
20 Summer Hill, £10 1/2.  
20 W. Drake Walls, £5 6d.  
2 Tincroft, £13 1/2.  
10 E. Lovell, £7 1/2.  
8 W. Chiverton, £24 1/2.  
10 East Caradon, £25 1/2.  
1 Wheal Bassett, £79.  
25 Chontales, £5 1/2.  
20 Pr. of Wales, £2s. 6d.  
1 Clifford, £8.  
10 W. Valley, £5 8 1/2.  
20 West Tolgus, 8s.  
15 Prosper Unit., £2 16 1/2.  
20 Redmoor, 7s.  
20 Anglo-Brazil., 13s. 3d.  
3 East Bassett, £19 1/2.  
10 Chiverton, £26 1/2.  
20 Drake Walls, 12s.  
50 Don Pedro, £17 1/2 pm.  
4 Providence, £30 1/2.  
20 E. Grenville, £1 18s 9d.  
20 Frank Mills, 18s. 9d.  
2 Wheal Buller, £24 1/2.  
5 Gt. W. Vor, £18 1/2.  
20 Frontino, 11s. 8d.  
20 RosewarneCons., 3s 6d.  
25 South Darren, 23s. 9d.  
20 North Jane, 3s. 3d.  
25 So. Condurrow, 12s 6d.  
15 East Carn Brea, £2 16s.  
10 Chiverton Moor, £5 8 1/2.  
6 West Caradon, £5.  
15 North Crofty, £4 1/2.  
15 Gt. No. Downs, £4 13s 9d.  
30 East Russell, 32s.  
30 So. Frances, £29 1/2.  
20 Grenville, 14s. 6d.  
5 Great Laxey, £18 1/2.  
50 West Kitty, 12s. 6d.  
20 West Maria, 17s.

**WILLIAM MITCHELL, STOCK AND SHAREDEALER,**  
either for cash or time transactions, and has ESPECIAL BUSINESS in the following shares:—  
50 East Caradon.  
20 Great North Downs.  
10 Deep Level (Halkin).  
150 Chontales.  
150 Mines Purchase.  
100 East Russell.  
200 Prince of Wales.  
100 Bryn Gwilog.  
50 North Crofty.  
500 Grenville (offer wntd.).  
100 Westminster.  
10 Carn Brea.

PRINCE OF WALES.—I have not given my opinion without due consideration and personal examination, and still persist an engine is required, as all the levels in the mine are suspended in consequence of not having drawing power. If they cut a north lode they may get another pumping-engine under weigh directly. In my opinion, if the mine is fairly worked the dividend will be the first and final. MINES PURCHASE, &c. (Limited).—1. The dividend promised in August has been deferred. I should say sine die. GREENVILLE.—Another "ramping" call, but not sufficient to pay off all the outstanding bills, some of which I hear have been running for three years. Another case by-and-by for the—  
STANLEY COURT.—2. Ought to have been abandoned years since. It is things as these that deter the public from going into honest and legitimate mining.  
Apply to Wm. MITCHELL, 42, Cornhill, London, E.C.—Sept. 6, 1867.

**MR. GEORGE BUDGE, STOCK AND SHAREDEALER,**  
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 19 years), has FOR SALE at net prices:—100 Anglo-Brazilian, 16s. 6d.; 50 Don Pedro, £2 prem., ex div.; 50 Pestarena; 100 West Tremayne, 7s. 6d.; 150 Frontino and Bolivia, 12s. 6d.; 25 Pestarena; 100 West Tremayne, 7s. 6d.; 50 Okel Tor; 150 Redmoor, 6s. 6d.; 10 Rose and Chiverton United; 50 Pendon, 17s. 6d.; 100 North Downs, 9s., call paid; 50 Wheal Grenville; 50 New Quebrada, 18s. 6d.; 100 West St. Ives; 50 Calbeck Fells, 17s.; 30 North Retallack, £25; 200 Dale, 2s. 6d.; 20 Crebhor, 8s. 6d.; 25 Gawton, £4; 40 Drake Walls, 12s.; 40 Creake; 70 West Drake Walls, 8s.

**CORNISH, DEVON, AND GOLD MINES.—**  
Shareholders should read this week's number of PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST" (No. 440, Vol. IX.). Price 6d. each copy, forwarded immediately on application. BUYERS and SELLERS of shares in mines, before operating, will do well to read this "Weekly Circular," published every Friday. 79, Old Broad-street, London.

**PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES,"** of Friday, Sept. 6, No. 440, Vol. IX., price 6d. each copy, forwarded on application, containing information on the following mines:—  
East Wheal Lovell. Marke Valley. Drake Walls. East Trumpet. Tincroft. Prince of Wales. North Wheal Chiverton. Great South Tolgus. Wheal Grenville. Chiverton Moor. Cook's Kitchen. Wheal Seton. Great Work. Providence. Wheal Bassett. South Wheal Frances. Chontales. Devon Great Consols. East Caradon. Mining Association (Limited). Dolcoath. West Drake Walls. Trumper Consols. North Roskear. Great Laxey. West Chiverton. Prosper United. West Wheal Seton. Wheal Chiverton. Wheal Mary Ann. East Wheal Bassett. Great Wheal Vor. Clifford Amalgamated. West Wheal Frances. South Wheal Crofty. Stray Park. Botallack. Don Pedro North del Rey. Great North Downs. West Caradon. Pestarena. With Remarks on the Present Prospects of the Cornish Mining Interest, and advance in the Copper Standard, and particulars of the lately-published Board of Trade Returns.  
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London, E.C.

**STOCK AND SHAREDEALER.—MR. PETER WATSON,**  
ENGLISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, 79, OLD BROAD STREET, LONDON, E.C.  
Railway, Joint-Stock Banks, Dock, Insurance, Canal, Mining, Steam-ship, &c., and every other description of shares bought and sold at net prices. TELEGRAPHIC MESSAGES TO BUY or SELL Railway, Bank, Mine, and other shares and stocks, punctually attended to, at net prices for cash, or for fortnightly settlements, with advice as to purchases or sales. Twenty-two years' experience. (Two in Cornwall and Twenty in London.)

Bankers: The Alliance Bank, and the Union Bank of London.  
From the close proximity of his offices to the Stock Exchange, as well as the Mining Exchange, PETER WATSON is enabled to act with promptitude on all orders entrusted to him, which at all times are carried out with punctuality, and to the best advantage of his clients.

**MR. EDWARD COOKE, STOCK AND SHAREDEALER,**  
76, OLD BROAD STREET, LONDON, E.C.  
Deals in Chontales, Don Pedro North del Rey, Rossa Grande, Anglo-Brazilian, Frontino, Prince of Wales, Chiverton Moor, North Wheal Chiverton, West Wheal Kitty, West Great Work, and North Crofty, at close market prices net. Orders for all kinds of Stock Exchange securities, either by letter or telegraph, promptly attended to. Satisfactory references given in any town in the United Kingdom. Bankers: Alliance Bank.

**MR. W. H. CUELLO,**  
(late of the firm of WATSON AND CUELLO),  
STOCK AND SHAREDEALER,  
1, FINCH LANE, CORNHILL.  
References exchanged. All transactions can be for cash or account. Bankers: Bank of England.

**MR. T. ROSEWARNE, 81, OLD BROAD STREET,**  
LONDON, has BUSINESS in the following shares for cash or time on:—  
Clifford. East Grenville. North Trekerby. Crebhor. East Carn Brea. North Retallack. Chiverton Moor. Frontino. Prince of Wales. Chontales. Gawton. South Frances. Caldbeck Fells. Great North Downs. South Grenville. Cargill. Great Laxey. Wheal Seton. Devon Consols. Great South Chiverton. West Chiverton. Don Pedro. Great Retallack. Wheal Agar. East Russell. Marke Valley. West Seton. North Crofty.

PRINCE OF WALES.—I find from my reports that there has not been much done underground since last week, but now we have rain no doubt the mine will soon be all right again. I am a BUYER of any part of 1000 Okel Tor at market prices; also 500 East Carn Brea, 500 North Trekerby, 100 Gawton, and 10 Wheal Seton. SPECIAL BUSINESS in the shares marked thus\*. Money advanced on good mining shares. Office hours from 10 to 4. Bankers: Bank of England.

**GEORGE RICE, STOCK AND SHAREDEALER, 78, OLD BROAD STREET,**  
LONDON, E.C. (Member of the Mining Exchange, 25 years' experience), TRANSACTS BUSINESS IN MINING SHARES, at close prices. Money advanced on mining shares. Bankers: Bank of England.

**BARTLETT AND CHAPMAN, STOCK AND SHAREDEALERS, 2, BUCKLESBURY, LONDON, E.C.**  
SPECIAL BUSINESS in:—  
Great Laxey. East Providence. East Chiverton. West Chiverton. Wheal Treawny. Great South Chiverton. Wheal Seton. Prince of Wales. North Trekerby. West Seton. Chiverton. Nangles. East Lovell. Chiverton Moor. North Jane. Shares marked \* should be secured at the present quotations; they are safe for a substantial rise in price before long. BARTLETT and CHAPMAN'S "Investment Circular and Financial Record" for this month is now ready, which contains important information as to Great South Chiverton, East Chiverton, Lovell Consols, West Chiverton, and several others likely to have a great advance within the next few weeks. Bankers: London and Westminster Bank.

**MATTHEW GREENE, STOCK AND SHAREDEALER,**  
ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C.  
MATTHEW GREENE recommends for immediate purchase Tamar Valley Silver-Lead shares, now selling for a few shillings per share, and certain for a rise to as many pounds in a few fathoms sinking. Parties desirous of investing in this most promising lead mine should apply at once. Plans, specimens of the lode, and every particular can be had at MATTHEW GREENE'S office. MATTHEW GREENE confidently asserts that no such chance is at present to be had as the shares in this mine. MATTHEW GREENE is most desirous that all parties meditating taking shares should first either see for themselves or send a competent mining agent to whom, on application, MATTHEW GREENE will be happy to give an order to inspect the property.—Bankers: Ransom and Co., London.

**MR. EDWARD BREWIS has RETURNED from his USUAL TOUR,** and has BUSINESS as BUYER or SELLER in Chiverton, Prince of Wales, Clifford, West Chiverton, Wheal Buller, Chiverton Moor, North Trekerby, West Caradon, Don Pedro Gold, Frontino Gold, &c., &c. Can recommend a share certain to rise in price. No. 8, Warford-court, Bank, London, E.C.

**WALTER TREGELLAS, 122, BISHOPSGATE STREET**  
WITHIN, E.C., DEALS in ALL DIVIDEND and sound PROGRESSIVE MINE SHARES, either for cash or the fortnightly settlement at close market prices. Has BUSINESS in St. John del Rey, Don Pedro, Anglo-Brazilian, Frontino, Rossa Grande, Chontales. WALTER TREGELLAS can confidently recommend the Taquaril Gold Mine. Full and reliable information on application. Bankers: Alliance Bank.

**INVESTMENT, LOAN, AND BANK AGENCY.**  
Established 1839.  
Investments and Sales of every description of Public Securities can be effected, either for immediate or deferred settlement, as may be agreed upon. Loans granted, for one year or any shorter period, on Stocks and Shares having a market value. DEPOSITS of all amounts received at 5 per cent. Bank and Money Agency Business generally undertaken. RICHARD TAYLOR AND COMPANY. No. 12, Clement's-lane, Lombard-street, London, E.C.

**M. R. CHARLES THOMAS,**  
MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER,  
3, GREAT ST. HELEN'S, LONDON, E.C.

**MESSRS. LANE AND GIBBS, 2, ROYAL EXCHANGE,**  
LONDON, E.C. (Members of the Mining Exchange), STOCK AND SHAREDEALERS, AND FINANCIAL AGENTS, transact business in all kinds of securities at closest net prices for cash or account. Parties of respectability can have transfers registered in their names previous to payment. Daily price list on application. Bankers: London and County Bank.

**SAFE INVESTMENTS,**  
paying 5 to 20 per cent. per annum on outlay. SHAREHOLDERS, CAPITALISTS, AND INVESTORS requiring valuable and reliable information, and seeking safe, sound, and profitable investments, should at all times consult SHARP'S INVESTMENT CIRCULAR. Post free. It is a safe guide for executors, trustees, and others. GRANVILLE SHARP, STOCK AND SHAREDEALER, 32, POULTRY, LONDON, E.C. FOR SALE:—50 Wheal Emma (Buckfastleigh). An offer wanted. 10 Great Laxey, £18 10s. per share net cash. Bankers: London Joint-Stock Bank.

**MR. J. B. REYNOLDS, STOCK AND SHAREDEALER,**  
70 and 71, BISHOPSGATE STREET WITHIN, LONDON, E.C.  
Continues to TRANSACT BUSINESS at NET PRICES in all classes of securities FOR CASH, and points out the advantages of the system under which he conducts his business. For prompt delivery, effectual guarantees against dishonoured transfers, he holds himself responsible. Mr. REYNOLDS is well known in the mining districts to many friends with whom he is in constant communication, and his residence for many years in Cornwall, and the long period of his connection with the London markets, render his services valuable. Mr. REYNOLDS points out the facts, with great satisfaction, which have recently come under his notice with reference to many mining properties now selling at prices which almost puts them out of the catalogue of speculations, and installs them amongst the best investments of the day. Mr. REYNOLDS does not advertise shares at fixed prices, but at the same time fulfils contracts on as good terms as those who do, and in many instances at far lower quotations. FOR SALE:—  
10 Westminster. 30 Gt. South Chiverton.  
20 Colquite and Calling-ton United. 20 West Chiverton.  
15 Gothic. 20 Rose and Chiverton.  
5 Great Wheal Vor. 20 Prince of Wales. 1 Devon Great Consols.  
50 West Wheal Kitty. 75 West St. Ives. 50 Dale.  
50 Cuddra. 10 Central Snailbeach. 20 Great Retallack.  
5 North Retallack. 5 Great Laxey. 25 West Prince of Wales.  
And is a BUYER of a limited number of most of the above, and of any number of West Wheal Kitty, Rose and Chiverton, and West St. Ives shares. Established Ten Years. Member of the Mining Exchange. Bankers: City Bank.

**MR. HENRY MANSELL, STOCK AND SHAREDEALER,**  
No. 44, THREADNEEDLE STREET, LONDON, E.C.

MR. HENRY MANSELL, having had twelve years' experience in the Mining Market, now begs to offer his services in the purchase and sale of Stock and Mining Shares. References exchanged.

**MESSRS. POWELL AND MOSS, SHAREDEALERS,**  
78, OLD BROAD STREET, AND MINING EXCHANGE, LONDON, E.C.  
Messrs. POWELL and MOSS have SPECIAL BUSINESS, as BUYERS or SELLERS, in West Chiverton, Chiverton Moor, North Crofty, Prince of Wales, North Trekerby, Caldbeck Fells, Frontino, Chontales, and Don Pedro. Sept. 6, 1867. Bankers: Bank of England.

**MR. R. EMERSON, 28, GREAT WINCHESTER STREET,**  
LONDON, E.C., has the following SHARES FOR SALE:—6 West Great St. George; 50 West Wheal Kitty, 13s.; 20 Great South Tolgus, 10s.; 100 West St. Ives, 6s.; 50 Budnick Consols; 10 Rose and Chiverton United, £6; 50 Gwydyr Park, 3s. 6d.  
MR. EMERSON, from his lengthened experience, feels more than justified in recommending the immediate purchase of West St. Ives shares. The mine never looked better, and in his opinion will be a great prize. See report in to-day's Journal. Advice given on the sale and purchase of shares. Eighteen years experience in Cornwall and Thirteen in London.

**MR. D. STICKLAND, M.E.,** having had upwards of 40 years' mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon. Mining, Railway, and other Shares bought, sold, or exchanged. Shares for sale in mines and quarries that will pay 15 to 20 per cent. per annum. Offices, 8, Finsbury-street, London, E.C.

**JAMES SCOTT AND CO., STOCK AND SHAREDEALERS,**  
1, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C.  
All Stock Exchange securities dealt in at close market prices for cash or the bi-monthly settlement. References given. JAMES SCOTT and Co. have large dealings in East and West Caradon, East Lovell, North Crofty, Prosper United, Prince of Wales, Anglo-Brazilian, Don Pedro North del Rey, Pestarena, Chontales, and Frontino and Bolivia shares. N.B.—JAMES SCOTT and Co. are the proprietors of the "British and Foreign Mining Circular."

**FRONTINO AND BOLIVIA MINING COMPANY (LIMITED).**—JAMES SCOTT AND CO. are BUYERS of any part of 1000 shares in this company, for cash or the account. Please state number and price.

**DON PEDRO NORTH DEL REY MINING COMPANY.**—JAMES SCOTT AND CO. have a considerable number of these shares for sale. Any reasonable offer will receive attention.

**MESSRS. FREDERIC GILL AND CO., STOCK AND SHAREDEALERS,** ST. CLEMENT'S HOUSE, CLEMENT'S LANE, LONDON, E.C., TRANSACT BUSINESS in all MINING STOCKS and SHARES at closest market net prices, either for cash or account.

**MESSRS. J. TAYLOR AND CO., MINING AGENTS AND SHAREDEALERS,** 17, CROSS STREET, MANCHESTER, have FOR SALE:—  
50 Clyne Colliery. 30 East St. Just. 10 Redmoor.  
30 Cashwell. 20 Great Mona. 5 North Jane.

**MINERAL RIGHTS ASSOCIATION.—THE ADVERTISER,** who wishes to have shares in the re-constituted company, is PREPARED to BUY MINERAL RIGHTS SHARES from shareholders who may not have sent in their consents. Address, stating price, "A. B.," MINING JOURNAL Office, 26, Fleet-street.

**CHONTALES GOLD COMPANY.—FULL PARTICULARS** of the DIFFERENT CLASSES of SHARES can be obtained on application to Mr. J. H. MURCHISON, No. 8, Austinfriars, E.C.

**MR. JAMES STOCKER,** STOCK AND SHAREDEALER, PALMERSTON BUILDINGS, OLD BROAD STREET, LONDON, E.C.

**MR. J. N. MAUGHAN, STOCK AND SHAREBROKER**  
(Member of the Stock Exchange).  
No. 2, COLLINGWOOD STREET, NEWCASTLE-ON-TYNE.  
Transacts business in Railways, Funds, and every description of Mines. Bankers.—Messrs. Lambton and Co.

**MESSRS. MCNEILL AND LONG, STOCK, SHARE, AND MINING DEALERS,** 31, THREADNEEDLE STREET, LONDON, E.C.

**MESSRS. KEANE AND CO., MINING AGENTS AND SHARE BROKERS,** BRIDGEWATER CHAMBERS, BROWN STREET, MANCHESTER, devote special attention to MINING in WALES and the NORTHERN and MIDLAND COUNTIES. From their consequent intimate connection with these districts, Messrs. KEANE are always in a position to supply their clients with the latest and most reliable information, and to transact with promptness all business entrusted to them, at the best prices of the day. Messrs. KEANE transact business either at net prices or on commission.

## Original Correspondence.

## CORNISH ENGINES, &amp;c.

SIR,—I send you the following remarks on the papers and discussion at the Swansea meeting of the South Wales Institute of Mining Engineers, on Aug. 17, the particulars of which appeared in the Supplement to the *Mining Journal* of Aug. 24.

Mr. Ross said that the ordinary standard of perfection of the Cornish engine was 80 millions of foot-pounds for 1 cwt. of coal consumed, or 2½ lbs. of coals per horse-power per hour; but, after all, he seems to think that this is no great effort, for marine engines, with comparatively low pressure, realise a duty of 3½ lbs. per horse-power. This does not fairly state the case, because the former calculation is the actual pounds of water raised—the actual duty, minus friction. Now, as everyone knows, in marine calculations the duty actually performed is plus friction, and a great many other items get into the calculation of horse-power, and if the marine engine were put to pumping water we should very likely find it actually consuming 5 lbs. or 6 lbs. or more per horse-power. Mr. Ross has simplified the statement of duty, but he might have done so still more by showing the work done. Thus, a Cornish engine, doing 80 millions of duty, will work an 18-in. plunger, working 10-10 ft. strokes per minute, for 100 fms. (1080 gallons per minute), and only use about 4½ cwt. of coal per hour, or 5 tons 16 cwt. of coal in the 24 hours. Now, I have no hesitation in saying that there are no engines in England, except Cornish engines, doing this amount of work, with 12 tons of coal in the 24 hours.

Mr. Cope Pearce thinks an objection to the bucket-pumps is that the rods are out of sight; and this is true to some extent, but he must know that every time the bucket is changed the nuts, if anything is wrong, are on the top of the lids. Buckets are much handier than plungers; they take up less room, and are simpler than forcing sets. I cannot see how the want of balance-bobs throws any more weight upon the beam. The balance-bob is to the Cornish engine what a fly-wheel is to a rotary or winding-engine. No mention is made of the "travelling suction" for sinking. If the size of the pumps are under 18 inches, this is an admirable contrivance; the pipes are generally made 11 feet long, and are telescopic, so that when run out there is room for putting in a 9-foot pipe between the bucket-door and the next pipe above it, so that instead of having to lower all the set, and put the new pipe on at the top, it is only necessary to lower the bucket-door, working barrel, clack-seat, and suction. Wooden bucket-doors are much lighter than cast-iron ones, but they are very seldom used now; the screw and chain make the door easily handled. There is no reason why they could not adopt the Cornish engine in Newcastle; but is only within the last 10 or 15 years that the North of England are becoming alive to the fact that economy of fuel means economy of life of the engine and boilers, as well as economy of coal; and, no doubt, they will come into it by-and-by. We must give them credit for what they have done, when they had nobody to copy from.

The Newcastle winding-engine is direct acting, the winding-drum is on the crank-shaft, and of its kind it is a very useful engine. It will wear longer than any other engine. By the way, we cannot copy winding-engines from Cornish practice; the Cornish winding-engine is a sorry affair; either it has been copied from Staffordshire practice, or Staffordshire from it. It is a mistake to say that there is no provision made to throw the plug-rod out of gear in those engines; this is very effectively done by the brakeman, as anyone may see by watching his movements. It is merely necessary to keep the handles from flying up or down when they are thrown out of the catch, and is a far better mode than with the joint on the handle. So long as engines are direct acting without gearing, so long must the speed of the piston be slow. I rather think it would be a mistake to go to small drums; the better practice would be to have gearing and much larger drums, driving by small engines going at a great velocity. The drum might be (say) 30 or 40 feet diameter, cogged on one side, and the small engines working at it. In this way, also, the very heavy shafting might be dispensed with, and the wheel hung like a water-wheel. You might thus obtain great speed in winding, with great command, and the least possible weight. It is not difficult to see that, if a drum be 20 feet in diameter, or, in round numbers, to be raised 10 fathoms for each stroke of the engine, it will require much greater care and attention to prevent overwinding than if the engine made 6 or 8 strokes for one revolution. It has often occurred to me that the safest and quickest way of winding coal would be either to adopt this plan, or to have a cylinder of (say) about one-sixth the length of the pit, with drums so proportioned that the cage would ascend by one stroke of the (open topped) piston. Double cylinders and link motion are decidedly preferable for winding, as far as stopping and reversing is concerned. Horizontal cylinders wear, and although a vertical cylinder thirty years old may be found winding away, I do not think that a horizontal cylinder would live as long. There is an objection to the link motion. Suppose anything to go wrong with any of the pins or rods or connections of the link while the engine is drawing a cage up the pit, the engineman is helpless; he can do nothing but shut off his steam and hold his brake. There is a safe rule in the Newcastle mines, that an engineman must hand his engine, and go at half-speed with men. He cannot hand the link motion. A BRAKEMAN.

## PREVENTION OF ACCIDENTS FROM OVER-WINDING.

SIR,—Observing in your report of the meeting of the South Wales Institute of Engineers that a paper is to be read by Mr. W. Fairley, of Swansea, upon the prevention of accidents from over-winding, it may not be uninteresting to the readers of the *Journal* to remind them of what has already been done in the same direction. There are many, no doubt, who still maintain that it is preferable to rely upon the skill of the engineman, and, for my own part, I would quite as readily trust myself to a good man as to the most ingenious safety apparatus that could be devised; and in nine pits out of every ten I should have no fear in travelling up and down as often as any working collier, although neither safety-catches nor apparatus to prevent over-winding were used. But it must be remembered that there are carelessly managed pits, and at these the use of safety apparatus is absolutely indispensable. We may, therefore, enquire what general principles are involved in the construction of the several contrivances. They appear to arrange themselves almost naturally into three classes, the first comprising those which aim at detaching the cage before it is drawn over the head-gear, and relying on other arrangements to prevent its descent into the shaft; the second, those which make the ascent of the cage act upon the engine direct; and the third, which I think is represented by a single invention, which provides that in the case of over-winding the entire head-gear shall be removed from the shaft. Of the first two principles there are many modifications, but I am not aware that the third has ever been really practically tested.

Amongst the inventions of the first-class, the invention of Mr. R. Aytoun is undoubtedly the most valuable: it is at once simple and efficient—the whole apparatus, both for preventing over-winding and for arresting the descent of the cage, can be made in any smith's shop, and would not cost 10s. His safety-catch is no more than a horizontal bar with two studs on it; his safety-hook simply three pieces of steel-plate properly slotted, so as to form a place to hold the cage-hook whilst all is going on well, and to open and drop out the cage-hook when through over-winding the plates are drawn through a ring suitably placed. For the information of those who may desire to introduce this catch, it may be stated that all that is necessary is to take a bar of sound iron, say 4 inches wide, and of a length equal to two-thirds of the breadth of the cage. Now, if one end of this rod be placed flush with the end of the frame of the cage, and it be fixed to the cage by a pin, there will be formed an ordinary lever; at the outer end of the cage a stop is placed to prevent the lever rising above the horizontal. The next thing is to put studs on the lever, so that they may be "laid on each side of the guide-rods. Of course, there is a similar contrivance on each side of the cage. The cage is suspended by four chains in the usual way, except that two of these chains are attached to the outer end of the levers instead of to the cage.

It will be readily understood that by this arrangement the catch will run free of the guides as long as the winding-rope is tight, but if it slacken, either from breakage or otherwise, the whole weight of the cage will be applied to force the studs against the guides, and its descent will, of course, be at once stopped. As to the apparatus for

preventing over-winding, it consists of three plates, the two outer of which are of the form of the isosceles triangle, and have vertical slots in the lower part; the third, or inner plate, forms a kind of hook, which closes the lower end of the slots in the outer plate, the upper end of the hook-plate is also oblique, so that when the apparatus is pulled through a ring (which is fixed in the head-gear), the slots are opened, and the cage-hook falls out. To keep the slots closed while the work is going on properly, Mr. Aytoun fastens them with a soft metal bolt, which is easily cut through when the plates are drawn against the ring. A cheaper and more efficient contrivance than this it is difficult to conceive.

As to the contrivances for cutting off the steam from the engine, applying the brake, and thus stopping the cage by automatic arrangements, they are at best but of doubtful utility, as they are all necessarily so complicated as to be very liable to get out of repair, even if their existence did not materially interfere with the freedom of the engineman to work—the effort should be to lessen the number of parts in the engine, rather than to increase them, especially by connecting the steam-cocks with the pit head. I do not think that the proposition has ever been put into practical operation at a pit, although I think it was an engineman from whom the suggestion first emanated, nor am I aware that there is any patent bearing upon the subject. But the invention of the third class to which I have alluded is that of Mr. George Addenbrooke, whose address I cannot at the moment recollect, but I believe that this, in connection with a good disconnecting hook, is the plan which will ultimately be general. Mr. Addenbrooke proposed to make the entire head gear movable, on a hinge upon the side nearest the engine, so that in the event of over-winding the whole structure was overturned, and the cage landed some distance from the mouth of the pit in safety. But, according to Mr. Addenbrooke's arrangement, the cage was not very likely to remain there, as in another moment it would in case of continued inattention on the part of the engineman be subjected to another jerk. This defect, however, is one which is easily remedied by providing a detaching hook, and the men would then in case of accident be left in safety after the head-gear is pulled over, however long the engine might be left running. Then, again, Mr. Addenbrooke proposed to steady the head-gear whilst all was going on well by simply giving the back legs of the gear, but I think it would be an improvement upon this if the front legs were fastened by a soft bolt, as in Aytoun's disconnecting link, the cutting plates being placed two on the legs and one on the stand, or *vice versa*, as preferred. This is an invention which is at least worthy of trial, and probably Mr. Addenbrooke would not object to give a more detailed description of it.

Sept. 4.

H. W. V.

## APPLICATION OF MACHINERY TO CORNISH MINING.

SIR,—An examination of the locality and inspection of the mines has satisfied the writer that the Drill of General Haupt, recently experimented upon before the Royal Polytechnic Society and the Miners' Association of Cornwall, with its simple mode of mounting, is most perfectly adapted to Cornish and other similar mining, that the expenditure for machinery would be trifling, for maintenance inconsiderable, and for power nothing. In nearly all Cornish mines shafts are sunk to a depth of several hundred fathoms, from the bottom of which the water is pumped by enormous engines, the cylinders of which are single-acting, 8 to 10 ft. in diameter, and 9-ft. stroke. The power of these cylinders is exerted in raising very heavy pump-rods, about 2 square feet cross section, made of timbers strongly bolted together. The descent of the rods is effected by gravity, and the weight is so great that a balance-bob must be applied, to counterbalance in part the weight of the rod. As this counterbalance is never fully equal to the weight of the rod and the column of water raised, there remains an excess of weight on the descending stroke, which can be utilised by applying it to operate one or more single or double acting compressors, by means of which air at any required density can be forced into a receiver. It is true that by this mode of compressing air a power will be expended five times as great as that which can be exerted by the air when compressed, but it is a power which now exists, and is unemployed. To utilise this power involves no expenditure, except for the first cost of the compressor and receiver, not a shilling for maintenance, and when compressed air costs nothing it would be useless to search for any other power that could compare with it in eligibility. It is possible that cases may exist where power may not be in excess. Under such circumstances, instead of working the compressor directly from the pump-rod the reciprocating motion of the rod can be used to rotate a crank, to which a fly-wheel is attached, and from the axle of the fly-wheel a number of smaller compressors can be worked by means of cranks or eccentrics, placed at different angles. In this way but little power will be lost in compressing air, but much more room will be required, and the expenditure for plant will be increased. The compressor, when only one is used, should consist of a vertical cast-iron cylinder, furnished with suitable valves. The piston should be moved by a rod attached to a projecting arm on the pump-rod. The stroke would, of course, be equal to the stroke of the water-pump. At each stroke the cylinder would be filled with air, and when the air became compressed to the desired tension it would open a valve, and escape into the reservoir, upon which an ordinary safety-valve should be placed, to prevent any pressure beyond the required tension. A column of water to maintain absolute uniformity of pressure, as at the Mont Cenis Tunnel, is a beautiful appliance, but it would involve the necessity of a second reservoir of water at the required head, connected by a pipe with the receiver, and thus introduce more complication and expense. With a receiver of 100 cubic feet capacity the fluctuations of pressure would be inconsiderable in the working of the drills.

All the apparatus necessary, therefore, to furnish sufficient compressed air at a pressure of 60 lbs. per square inch to work two or three drills constantly would consist of a single air compressor, a rod to connect the piston with the pump-rod, and a common cylindrical boiler, of small size, for a receiver. The compressor cylinder should be double acting, 15 in. in diameter, and ½ in. thick. The compressor would weigh, at most, half a ton, and with piston-rods and valves complete should not cost in Cornwall more than 20l. to 25l. sterling. Making seven strokes per minute, this pump would deliver into the reservoir, at a pressure of 60 lbs. per square inch, 30 cubic feet of air, and as the quantity required for one drill, working 300 strokes per minute, would be 14 cubic feet, the compressor would at all times supply at least two drills; nevertheless, a reservoir is required to maintain uniformity in the pressure. A reservoir (say) 3 ft. in diameter, and 20 ft. long, would contain 140 cubic feet. It would weigh 2000 lbs., and cost, with safety-valve complete, about 20l. The drilling-engines, if made in quantities, with machinery properly adapted to their construction, should be furnished for about 40l. each. The stand or frame for mounting the drills should be furnished for 30l. The valves, pipes, and couplings, 15l. Cast-iron pipes (for conveying air to drills), 2 in. in diameter, would cost about 4s. per fathom. Incidental, (say) 20l. Total cost of compressor, reservoir, two drills, stand, couplings, 10 fms. of pipe, and incidentals, would be 192l. This is the highest estimate; others made by proprietors of workshops have been less. Two extra drills should be provided as a reserve, which would cost 80l. more. For the removal and erection of the drills a light iron frame, mounted on two wheels, would be found convenient. Hand-drilling requires 3 minutes to 1 in. in depth, taking an average of 8 hours' work. In the same rock a progress of 2 in. per minute can be relied upon. Two, or even four, machines could be worked in the space in which only one drill could work by hand. If two drills only are at work the progress, as compared with hand, should be as 12 to 1 in favour of the machines. The further progress to be made by the use of nitro-glycerine and other explosives, and by simultaneous electrical blasting, having no reference to the machine itself, will not be considered.

The experiments made at Falmouth, in the presence of engineers and others, satisfied everyone of the perfection of the principle upon which Mr. Haupt's drilling-engine is constructed and mounted; and although the inventor did not claim that the machine experimented upon was perfect in its mechanical construction, but quite the reverse, yet as regards the principles involved it did not appear that any great improvement could be effected, every condition desirable in a drilling-engine—power, rapidity of stroke, rotation, perfect self-adjusting feed, extreme simplicity, strength, portability, small weight, mobility with stability, adaptation to all localities and kinds of work

—all these seemingly opposite conditions were fulfilled most perfectly. In the presence of the judges a person who had never before experimented, to determine how quickly the operation could be performed, withdrew one drill, and inserted another in 40 seconds, and, with practice, the change of a fresh point for a dull one could readily be effected in half a minute. The award of the judges was the highest premium authorised by the society, but, not regarding this sufficient, it is understood that they united in a declaration of the superiority of General Haupt's machine over all others known to them. This must be the more gratifying to the inventor from the fact that one of the judges (Dr. Foster) had been sent by the society to visit all the localities in Europe where machinery had been used to facilitate mining, and his report, with that of Mr. Charles Fox, was full and exhaustive, giving the results of every known attempt to facilitate mining operations by mechanical appliances, and illustrating in each case by complete drawings, models, or working machines. Dr. Foster, moreover, was one of the jurors at the Paris Exposition, and, although young, is regarded as one of the most accomplished mining engineers and geologists in the kingdom.

One of General Haupt's drilling-engines, with the momentum feed, is on exhibition at the Paris Exposition, and has been awarded a medal; but the present screw-feed is vastly superior, and would seem to be the perfection of a feed movement. The drilling-engine weighs but 125 lbs.; its extreme length is about 30 in.; width, 6 in.; and height, 8 in. It is mounted on two hollow iron columns, 4 in. in diameter, which, in driving a tunnel, heading, or level, are firmly and expeditiously fixed against the rock at the top and bottom, and, in sinking shafts, at the sides. The adjustments are made by keys. Four keys clamp the drill to the columns; they are loosened each with the tap of a hammer, when the drill can be pointed in any direction, and again clamped in the same manner. In changing the direction of the drilling-tool it is not necessary to turn a single screw, and all the keys are so secured that when loose none can drop out of place.

Some of the most important advantages which this machine possesses over every other previously invented for mining and tunneling consist in—

1.—The position of the drill cylinder when working, which is within a few inches of the face of the rock, leaving all the space in rear entirely unencumbered for the removal of material.

2.—The columns, on which from one to four drills may be mounted, stand on a base of only 8 in. diameter, and, with this exception, the floor is entirely unencumbered. As a consequence, the drills can be erected and the work resumed immediately after a blast, without in any degree interfering with the removal of material. Instead of blasting only two or three times per day, it should be possible, with the facility thus afforded, to blast at intervals of about two hours, and the progress is in proportion to the number of blasts in a given time.

3.—The drills are inserted from the rear, not in front, of the machine; each acts independently of all others, and one drill can be removed and another inserted without stopping any other machine, and in a period of time not exceeding half a minute.

4.—Mobility, with stability, and celerity of adjustment.

All these advantages are peculiar to General Haupt's drill and mode of mounting, and not one of them can be claimed for any other. We are informed that Mr. Loam, of the United and Consolidated Mines, and other engineers of eminence, noted for their practical ability and experience, who were present at the experiments at Falmouth, have expressed themselves as entirely satisfied that there is no practical difficulty in the way of the introduction of this machine, worked by compressed air, into Cornish mines, and there can scarcely be a doubt that the whole system of mining in Cornwall and elsewhere is about to be revolutionised.

General Haupt was requested to address the Miners' Association of Cornwall on Monday last, and for the valuable information which he communicated the thanks of the Association were voted. At the invitation of Sir William Williams, who presided at the meeting, General Haupt accompanied him to inspect the United Mines, and make an estimate of cost of air-compressor, receiver, and a sufficient number of drills to test their application to the work. The whole cost did not exceed 200l. A slight modification in the mode of mounting is sufficient to adapt the machine to open quarry work and rock excavations, and a number of small cylinders can be mounted on a frame for drilling, at the same time, a dozen or more of the small holes required in splitting granite.

J. A. M.

## THE PROGRESS OF MINING—AS A SCIENCE, AND SOURCE OF COMMERCIAL WEALTH—No. XIII.

SIR,—It can hardly be doubted that the greatest enemy to mines is the miner himself, including those who pretend to support him. By the miner I mean the practical miner, and by the supporter I mean those who ought to supply the capital and discretion for managing the monetary affairs of mining companies. If any corroborative evidence were wanted to prove that Nature has been universally bountiful to man in filling the metalliferous veins, whether with copper, tin, and lead in this country, or with gold at the Antipodes, the proof will be found in an excellent pamphlet published by Mr. R. L. M. Kitto, M.E., and entitled "The Gold Mines of Victoria," &c. Mr. Kitto says (page 47)—"In a country like Victoria, possessing agricultural lands second to none in the world, vast areas of pastoral land, where flocks and herds are easily raised, and where capital increases while the investor is asleep; in a country where the vine flourishes to perfection, and fruit trees grow as, perhaps, in no other part of the world; where on the tops of the vine-clad slopes the golden ores are spread over an area bounded only by the extent of the colony. In a country larger than Great Britain, possessing such resources, owned by a population of only 600,000 souls, need one wonder that the best only of this wealth is culled, and that only here and there are portions of the golden treasure exhumed?" Mr. Kitto says (in page 50) "The quartz mines of Victoria are not well managed, yet the result of mining for gold in quartz reefs, which, in other words, means gold lodes, is, in the aggregate, infinitely better than from the alluvial workings. I find from the Government statistics that during the year 1866, 55,916 persons were engaged in alluvial mining, and 14,878 in quartz mining. The result is that the earnings of the alluvial miners average 66l. 4s. 1d. for the year, and those of the quartz miners 132l. 17s. 4d. for the same period. It must not be forgotten that 20,100 of the number of the alluvial miners are Chinese, who are content to work for a few shillings weekly. This abstemious but industrious race work the shallow alluviums after they are abandoned by the European miner, and also in many instances obtain a living by sweeping the roads, which have been macadamised with quartz metal, in order to obtain thereby the stray particles of gold that may have been separated by the crushing of the heavy traffic." "I am certain," adds Mr. Kitto (p. 51), "that quartz engaged in working reefs known to contain gold realise on an average 15s. per man per annum. The wages of the hired miner range from 10s. to 45s. per week, or an average 22l.; thus giving exactly one-half of his labour to meet expenses of wear and tear of machinery and the payment of dividends, the proportion in favour of the capitalists will be increased to a large extent when the mines are systematically worked. Of 30,345 square miles in any part of which there is a possibility of remunerative gold deposits being found, only 869-17-40ths square miles, or about 1-33d, have been mined upon, and only about 1-200th part of the whole auriferous country was occupied at the end of 1866. On the quartz lodes, for instance, only such portions as are near the outcrops where the auriferous stone was discovered at the surface are occupied. These reefs, or lodes, may be traced many miles, and, as the shoots of golden stone run pretty regular, it only requires capital to open up mines of wealth equal to any yet opened. The present market value of the claims on the gold fields is 8,987,067l. sterling, and the worth of the machinery is estimated at 2,068,527l. sterling, making a total value of the mines and machinery at the present hour of 11,055,594l. The yield of gold for 1866 was worth 5,916,799l., of which amount 4,077,197l. 18s. 4d. was the produce of the alluvial gold, and 1,839,581l. 1s. 8d. from quartz. The average yield of gold from the quartz crushed in the colony, as per Government returns, is 11 dwts. 22-8 grs. to the ton of stone. The average for the last year was 10 dwts. 16½ grs. to the ton of quartz. The cost of raising and crushing quartz, together with the cost of management, from an averaged sized reef, or lode, (say) from 4 ft. to 5 ft. thick, will be about 13s. per ton, at 300 to 400 ft.—that is, from 50 to 60 fathoms from the surface. Taking the above estimate

on a basis, I find that with the average yield of the colony—10 dwts. 14 grs., or about 43s. per ton—the actual profit on working gold quartz would be 30s. on every ton of quartz crushed." In another paper we shall show how splendid results are marred in Victoria as well as in this country by financial manipulation, and how good properties are brought to ruin.—Sept. 3. — M. F.

#### THE MINERAL RESOURCES OF RUSSIA, AND THEIR DEVELOPMENT.

SIR.—In last week's Journal there appeared an interesting account of the "Coal Beds of Russia." In the latter part of the year 1856 I examined some important and extensive districts of Russia in reference to the great railway undertakings which were at that time in contemplation, and I was very much surprised to find so very little active enterprise, and the dogged adherence to the most expensive and unscientific mode in which every operation was being carried on. The Government officials appeared afraid to suggest any improvement, however obvious and however advantageous to the public service such improvement might be. From the immense resources of Russia, agricultural and mineral, and in consequence of the great area of surface over which these undeveloped resources are spread, I perceived at once that however extensively railways may be introduced into Russia they must be largely supplemented, in some cases probably by cheap narrow gauge railways, but principally by tramways. In order to meet the wants of important districts which can never be reached by railways, I made the accompanying comparative statement, and sent copies to some of the Government officials, without effect:—

#### RUSSIAN RAILWAYS AND TRAMWAYS.

##### COMPARATIVE MERITS.

- | RAILWAYS.   | TRAMWAYS.   |
|---|---|
| 1.—There are few districts of considerable extent in which a double line of railway, with the necessary stations and plant, can be constructed for a less sum than from 18,000 <i>l.</i> to 20,000 <i>l.</i> per English mile.  | 1.—An efficient tramway can be constructed, and the necessary plant supplied, at an average of from 1800 <i>l.</i> to 2000 <i>l.</i> per English mile.  |
| 2.—A single line of railway is very liable to accidents, notwithstanding the greatest care in its management.   | 2.—A single line of tramway can be worked with safety, with a passing place at each station. The stations would be placed in the most advantageous positions for the change of horses and the collection of freight.  |
| 3.—To construct a railway, with bridges and earthwork, for a single line, and subsequently to double the line, is injudicious in an engineering point of view, and by no means economical.  | 3.—No inconvenience would result from constructing a single line of tramway, and subsequently doubling it, in consequence of the simplicity of the works.   |
| 4.—To form the bridges and earthworks in the first instance for a double line, with permanent way and plant for a single line, leaving only the permanent way of the second line to be laid subsequently, if ever required, is correct upon engineering principles, but very false economy, as all the additional outlay upon the construction and maintenance of these extra works remains unproductive, but upon which interest must be paid. | 4.—The bridges on a tramway constructed for a single line need not be increased in width for a double line, as turning out and in when passing across the bridge can be safely and readily effected by the conductors of the train, without signals or pointmen, and adding to the earthwork presents no difficulty, and the tramway bridge could be used with safety for the local traffic of the country, whilst railway bridges could not safely be used for this purpose. |
| 5.—For the proper development of railways in Russia nearly all the labour in working the lines, as well as in the manufacturing and repairing establishments, must be skilled labour of the highest class, and for many years particularly imported, and consequently expensive.  | 5.—Scarcely any skilled labour would be necessary in the construction or working of tramways. In general the establishment of tramways would be the mere re-arrangement of the present postal establishments, and the construction of the passenger and traffic cars would be of the simplest character.  |
| 6.—The great national advantages to Russia of a well-devised system of cheap communication is principally for the development of the great agricultural and mineral resources of the country, and in but very few cases for the accommodation of passenger traffic. The economic speed for heavy goods traffic on railways is from eight to ten English miles per hour.   | 6.—This average speed of eight or ten miles an hour can be attained on tramways by the judicious use of inclined planes.  |
| 7.—Descending planes, where gravity would give the necessary velocity to a train, is of very little, if any, advantage to a locomotive line.  | 7.—Considerable portions of tramways can be very advantageously worked by gravity, and be made to accelerate the average speed.   |
| 8.—The cuttings on railways require great labour to keep them clear of snow in winter.  | 8.—There would be no cutting on tramways, as the tram would be laid on an embankment of about 3 or 4 ft. high, and the more undulating the surface the better for horse traction. There would, consequently, be no annoyance or expense from snow.  |
| 9.—Fuel for locomotives is very scarce and dear, and if wood be used for an extensive system of railways, that article, necessary to the very existence of the inhabitants during their long and inclement winter, would be seriously diminished.   | 9.—The feed for the horses employed on tramways is very abundant and cheap, and it is the production of the locality where used, consequently fostering native industry.  |
| 10.—It takes considerable time to transfer existing traffic into a new channel, and to create traffic which did not previously exist, consequently to employ a system calculated for the highest development of traffic is, to say the least of it, very injudicious.   | 10.—A cheap tramway in any part of Russia will be amply sufficient for the existing traffic, and for any increase which can take place for many years to come.  |
| 11.—To come from a railway to a tramway, where the traffic proves to be insufficient for a railway, would be contrary to the law of progress, and distracting to the progress of the country.   | 11.—To go from a tramway, when the traffic is fully developed, to a railway, is in accordance with the law of progress, and the tramway would very much facilitate the construction of the railway.   |

The great object to be aimed at is the development of the greatest amount of traffic at the least possible expenditure of capital, and to extend the advantages of cheap internal communication over the greatest possible extent of surface, and more particularly so in an extensive country like Russia. There can be no doubt but the present Emperor is fully alive to the development of the resources of the country, but he is so hedged in by slow coaches that it is difficult, if not impossible, to obtain permission to lay any project before His Imperial Majesty, however advantageous to the country such a project might be. The district from Nijne Novgorod, through Kazan and Perm, to the Oural Mountains mineral range would pay a high percentage on a cheap tramway, but would not pay the working expense of a railway. Many other important centres of commercial enterprise, such as Saratoga in the Volga, might be mentioned which would soon grow into importance when supplied with an efficient means of communication to the various outlets for trade.

ALEXANDER DOULL.

Institution of Civil Engineers, Great George-street, Westminster.

#### SUCCESSFUL MINING ENTERPRISE—NEW MINES.

SIR.—From the gradual improvement in the price of copper and tin, attention should now be paid to the discovery of new mines, particularly as labour is at present abundant, machinery and materials so plentiful and cheap. A few small companies, to the moderate extent of about 150,000*l.* to 200,000*l.*, would not be felt from the amount of spare capital laying unemployed. This sum extended over a period of two years, would, I doubt not, be well rewarded, and provide a vast amount of useful labour. This sum would, I sincerely believe, be equal to ten times the amount now laying out in foreign mining and other speculations, and, in well-selected districts, lead to the discovery of immense deposits of mineral. Many have suffered from rash and imprudent speculations; this will always occur, and the great danger of suppressing the spirit of enterprise too long, waiting any sudden turn of success. Then follows, as is always the case, many imprudent speculations; the most unlikely adventures are immediately taken up and launched, because the property is near some place of success, or called by a similar name. Mineral leases, particularly in Cornwall, can now be obtained on very liberal terms. The landowners see the necessity of encouraging enterprise at home, so as to enable British enterprise to meet foreign competition; but the fashion has been to bring out companies, charging 50,000*l.* for the grant of the concession of mineral properties abroad, and then 1,000,000*l.* sterling required to prove whether the property is valuable or valueless, as far as regards a commercial enterprise. Ten companies of 20,000*l.* each, payment extended over from two to three years, investors could then make their arrangements according to circumstances; this would be a safe enterprise, and by dividing the chances there is scarcely a doubt of success, judging from the events of past years. The evil of companies brought out on the misrepresented word Limited has

been that half the capital has invariably gone in preliminary and other expenses; the poor mines suffer all the blame, whether justly or otherwise. Which system has paid the best, moderate or gigantic concerns, as a speculation generally? AN ADVENTURER.

Cheltenham, Sept. 3.

#### HISTORY OF MINING—No. X.

SIR.—In my last letter I endeavoured, in the interests of mining, and in the general interests of commerce and politico-economical progress, to show the influence which mining has had upon the prosperity of ancient and modern states, and upon that of Great Britain particularly. It is the more important that this subject be pursued, with your kind permission, in your columns, as the despondency which for so long a time pervaded all connected with mining is giving place to a more healthy feeling. This is the case in every branch of metallic mining; and in almost every department of minerals there is improvement. Seasons of depression ought not to daunt the spirit of enterprise, nor depress the sanguine into the despairing. Business in every form must fluctuate with the influence of political and social occurrences, with the discoveries of science, of new material for commerce, and new regions worthy of development. The value of British tin and copper has risen, and is likely to rise, in the British market, for whatever the importation of those metals, there will of necessity be a demand for the products of British mines. The late season of depression has not been the only one known in our times, and as former periods of reverse were succeeded by highly favourable reactions, so will it be now that the tide has turned, and the flow is seen where the ebb so lately left its trace. The copper standard was actually lower eighteen years ago than it is now. Taking the last fourteen years in comparison with the fourteen which preceded them, the phenomena presented are favourable to the years more recently past. From 1838 to 1852 the copper standard was lower than during the last fourteen years, or the fourteen years which preceded 1838. Thus, periods of revulsion and reaction must come, and it is the investor's duty to expect the like, and to remember that mines are solid investments, which always yield valuable products, unlike the perishable commodities in which commerce so extensively deals. The investor should also remember that gold, silver, tin, copper, lead, and iron do not go out of fashion, as is the case with numberless other articles of use. A time will never come when the great metals the employment of which underlies all commerce shall cease to be in requisition and cease to be prized. Indeed, it is a remarkable thing in the present age, more so than it has been in any other, that where metallic treasures are discovered or developed, the country becomes more rapidly populous, powerful, wealthy, and civilised than any other. How strikingly this has been the case in Britain during the last half century. What but the mineral resources of England could have given existence and stability to nearly every other form of her industry? How is it that Lancashire and Cheshire are made rich, populous, and famous by making into twist, or web, or cloth, the cotton which these counties do not produce, but which was cultivated on the banks of the classic Nile, in the lands, European or Asiatic, of the Ottoman Turk, farther away still, in Southern Africa, on the irrigated lands of Eastern India, in Australia, or in the Western Hemisphere by the hand of the slave? All these remote countries send their agricultural products, and receive their back manufactured into cloth and garments by our hands, because we have mines and miners.

Let anyone go into the great cotton factories of Manchester, Salford, Oldham, Stockport, Ashton, Preston, or Wigan, and he will perceive, if his observing faculties be not obtuse indeed, that, wherever the material in process of manufacture has come from, all the movements and life of those hives of industry spring out of British mines. Mark the snorting steam-engine, which like the eager horse expresses in its own way the power it exerts—that engine is made of British metal; the power which creates the steam it is an instrument in using is mineral—the product of our northern coal fields. Stand apart, and take a comprehensive view of those apparently innumerable wheels—some vast, some marvellously minute, all whirling with ceaseless rapidity—and those stirring spindles, they came from our iron fields. Behold the leaden pipes, the steel and copper "reeds," the brass and tin joints and sockets, and receptacles for oil, and "dressing;" these are the products of Cornwall, Devon, Cardiganshire, and Stafford. It is the miner that had the first hand in all this perpetual and wealth-creating motion. The cotton lord may be a great man, but without the Lancashire collier, the Cornish copper miner, and the Staffordshire iron-blaster, his engine would cease to lift the huge cranks, there would be no wheels to set the music of the rattling looms, and his stores of cotton would be idle, or be turned to unprofitable use. In like manner let any observer look at the silk manufactures. That silk comes from the South of France, from Italy, from China, wherever the mulberry tree, and the worm that secretes from it the cocoon, are found. England produces no silk, but by the application to the produce of other lands of her vast mineral resources she sends from Spitalfields, Coventry, Macclesfield, Leek, Manchester, and Dublin the most elegant material which graces the forms of beauty. Again, there are the West Riding of York, with its vast steam power, and ever-increasing mills; and the woollen districts of the West of England, from Frome to Kidderminster. The sheep of the British Isles can give but a small portion of the wool which is made into worsteds, broadcloths, and carpets in those wealthy and populous districts. It comes from Germany, Spain, Australia, &c., because the English miners enable it to be here manufactured into valuable commodities. If the numerous dye yards and print works in England and Scotland be visited, the observer will soon learn that there also the miner is at the root of all, not only supplying the material for the machinery, but a large portion of the most beautiful dyes, by which the cloths are impressed with patterns of ornament. The hosiery of Leicestershire, the laces of Nottingham, the lawn, muslin, and cambric of Blackburn and Bolton, the shawls of Paisley, the tabinets and bombazines of Dublin, the linen and diaper of Belfast, Londonderry, Coleraine, and Dundee, with many other textile manufactures flourish, because our mineral resources and mineral enterprise flourish. It is altogether to the development of its mineral wealth, and the energy of its miners, that South Wales has become so much more prosperous in the present generation than it had ever before been, and it is one of the aspects of the times favourable to the mining interest that the demand for coal and iron in the Principality is now increasing. There is a steady advance in shipments of iron for foreign parts. The tin-plate makers, it is good for Cornwall to know, are busier in the South Wales district than they have been. Coke, charcoal, and anthracite are in demand for home consumption and for shipment, and the silver-lead mines of Cardiganshire are prosperous and promising, employing many of the people.

The impetus thus given to the mining industry of Wales, especially of South Wales, has shown itself within the memory of living men in an absolute transmutation of the appearance of the country. Merthyr Tydfil has become an immense centre of labour, Swansea and Newport large and enterprising ports, and Cardiff is advancing in population and business, proportionately, as fast as any port in Great Britain. It is to its mines, and their skillful and enterprising working, that South Wales is indebted for its rapid progress. Scotland during the last century was as proverbial for its poverty as Wales, it now pays a larger revenue than Ireland, and about one-tenth of the revenue of the United Kingdom. This improvement is to be attributed to its mining achievements. The mills and print-yards of Western Scotland, like those of England, are set a going and sustained by the mineral resources in their neighbourhood. So is the shipbuilding on the Clyde, as well as in England upon the Tyne, the Mersey, and the Thames. It is alleged that about seven-tenths of the working population of the Lowlands of Scotland live by working in mines, and by working mineral products. In the eastern district of South Scotland there are 274 collieries, yielding 6,400,000 tons; in the western coal district there are 223 collieries, yielding 6,250,000 tons. Cannel and Boghead coal have been developed in Scotland with rapid increase. There are about 150 furnaces in blast, yielding nearly 1,250,000 tons of pig-iron. The ironworks of Scotland are more important than those of any other portion of Europe, except England. Much of the increased wealth, population, and shipping on the Clyde and Forth are due to the progress of Scottish mining. Before

the grand development of mining property in Scotland the population hardly exceeded 3,000,000, now it is more than 4,000,000. In its mines Scotland had a noble source of supply for its people, and by working them with energy and intelligence, the population, property, and power of the Scotch people have been largely promoted. Thus wherever mining has been supported by capital in Great Britain the people, and the means of supporting the people, have multiplied, the national revenue has been augmented, the raw materials of all nations has been made up into useful articles by our people, our ports have been filled with shipping, and civilisation in all its forms has been advanced. I dare not trespass on your space in this letter, or I could show you that it is as true of all other places as it is of Great Britain, that mineral resources, spiritedly worked, lay the foundation for the growth and greatness of communities.

I shall just venture to select a few instances illustrative of this truth. New Zealand is the most recent of our Australian fields of mining enterprise. That colony, for various reasons, advances slowly, but as soon as mineral productions were found there, notwithstanding the formidable disaffection of the natives, population increased, the value of land rose, and public enterprise imbibed a new spirit. By the finding of gold in Otago, iron-sand in Taranaki, and other important discoveries not yet brought out so fully, the colony has put on a new life. According to the *New Zealand Examiner*, since the gold discoveries of 1861 in Otago more than two millions and a quarter ounces have been exported to England—this year already about 75,000 ounces. According to the same authority, population and property are making rapid strides. The extraordinary progress in people, cities, commerce, and wealth of those regions of the United States which lie upon or near the Pacific towards the south-west frontier, exemplify also the influence of mining upon the foundation and fortunes of states and territories. It cannot be pretended that the progress of California and New Mexico is to be attributed to anything else than their mineral resources. The history of Colorado, Nevada, and other portions of that region of the United States, would in the most striking and interesting manner prove and illustrate my assertions. Gold, silver, lead, copper, iron, coal have been found in great abundance in Colorado, and the result is that where the savage roamed the miner has in a few years created cities and civilisation. Nevada is not yet adequately explored, but her yield of silver is extraordinary, and there, also, the miner has moved the wigwag out of the way of the city—the white man displaces the red man, and the sound of the implements of civilisation has succeeded to the wild war-whoop or hunting cry of the Indian. In other letters I shall be happy to give a more detailed account of the progress of colonies, territories, and civilisation as the result of mines and miners.

Gresham House, London, Sept. 4.

THOMAS SPARGO.

#### EAST WHEEL NEPTUNE—GREAT WHEEL NEPTUNE LODGE.

SIR.—The attractive news from East Neptune will, we hope and believe, be fully borne out by the result of practically mining this discovery, after examining the rich specimens of solid light grey ore broken from the point where the face of the lode has been cut into northwards for a space of 18 inches, and finding inside this course of grey ore a course of rich malachite and fine gossan. It can hardly be imagined in such a district but that this is the commencement of the opening of a great mine. One rich mine profitably developed here will soon set going Wheel Caroline and other mines on the north-east branch of Great Wheel Neptune adit, and, probably, bring back that prosperity which, for a season, seems to have abandoned the western mines. Capitalists will do well to mind the signs of the times; the old proverb says "It is never darker than a little before day."

COPPER MINER.

#### SLATE TRADE IN NORTH WALES—No. IV.

SIR.—In this communication I would invite attention to a class of work connected with quarry operations which is looked upon too generally as one which requires but little, if any, ingenuity on the part of the workmen—I mean the duties of a "rockman." The great secret of quarrying the slate blocks *sizeable and sound* ought to command a larger share of attention and forethought than is usual even amongst those to whom that task is assigned. Great recklessness is often found, both amongst managers and men, in opening and removing beds of slate rock. By them the subject of economy and frugality is but little heeded; and, as a rule, but one only out of every four of the rockmen is to be found who studies lessons from the book of Nature. Therefore, without using the strictest vigilance, and observing the most rigid scrutiny, great waste must ensue. After a quarry has been sufficiently developed to set bargains for slate making, the first consideration should be the proper place to commence operations, which, of course, the agent is supposed to know. A mistake here will result in disaster. Ignorance and prevarication, unrestrained, are invariably attended with wanton improvidence on a large scale. It has cost the able rockman many years of incessant application and labour in order to qualify himself for discharging the duties of an efficient workman, whilst his fellow-labourer has received an equivalent in the shape of wages, without improving his acquaintance geologically, or taxing his faculties for the purpose of enabling him to make a corresponding return to the employer, agreeably advantageous.

Some parties imagine that boring and blasting are about all that is required of a rockman, and that any ordinary labourer can acquire sufficient knowledge of these for all purposes in one month. Very strange deduction this, especially coming, as it often does, from men of learning in other sciences. Equally erroneous is the idea that a scholastic can become, in the course of a few weeks, possessed of the ABC of all the essentials for the working of a slate quarry successfully. It is now pretty generally conceded that to obtain a knowledge of any art or profession requires not only fortune and years of time, but indomitable perseverance and an intellectually retentive memory. This being so, what foundation is there for any person to infer that geological problems can be known intuitively, or that, because a man is possessed of the art of writing and spelling his own language correctly, or has made himself proficient in mathematics, &c., he can, therefore, quickly master the more easy (?) rules appertaining to the manufacture of slate, instruct the artisan, and wisely direct all the machinery? The great misfortune (need I add) has been the sole control of this enterprise by totally unqualified agencies.

I have before remarked that the "proper plan to begin operations" on commencing the manufacture of slates is the first subject requiring attention. A superficial survey of external facilities will afford the agent but little assistance in arriving at a proper decision on this subject. Book knowledge can do but little to aid him in this intricate work. Scientific theories fall short, plodding and the most clever acuteness are inadequate. Who, then, can be sufficient for the emergency? The answer is simple. Who ought to be the most likely person? Beyond question, the man who has kept a record, during his servitude, of all the laws and rules as furnished him by Nature throughout the transitional changes so common to this deposit. The ever-occurring dissimilarity in the facilities for removing the slate "blocks" from their bed makes it necessary that the "rockman," especially the manager, should be well posted in the laws of relationship existing. His intimate knowledge of these matters only can assist him in rightly laying open the vein, with a view to render it profitable. How many slate quarries there are that have been opened at the wrong end, and no wonder, considering the abilities of the parties to whom the work has been confided. The greatest marvel is that authorities, in their right mind, should place such men in command, and furnish them with the means of carrying on their impolitic and wasteful adventures. I wish it to be understood that I am not referring to any particular persons, as there are many who are implicated, and who are better known to the arbiters of finance. Some party interest in the speculation is often the cause of their continuance in office. A great pity, indeed; but is there no remedy? Do the "Articles of Association" bind this insufferable burden on the shareholders? Is there no way of adjusting the terms imposed? Is the company doomed to undergo the trouble of "winding-up" a really legitimate concern, or succumb to the alternative—to pass through the painful exorcism of bankruptcy? To save trouble in cases of this kind, allow me to suggest an unreasonable yet profitable antidote, if perchance you may succeed. Pay the incompetent managers to stay at home, or, at least, to desist from further interference in the management of the quarry. Depend upon it the tables would soon be turned in favour of the exchequer. The monthly meetings of the

directors then forward would pass off with an increasing interest, soon to be succeeded by a "dividend" to cheer, instead of a "call" to annoy. With the right man in the right place, the directors can, without being led astray, or doomed to disappointment, look for results corresponding with the representations set forth in the monthly reports. Instead of the old *threadbare cause*, in all its magnitude, "unforeseen circumstances have prevented," &c.

I purpose in my next letter to describe a few of the lessons which should be carefully studied by every person aspiring to the management of a slate quarry. The same subject may be studied with advantage by the "rockmen," so that they may render their services (at good wages) both economical and profitable to the proprietors.  
Tremadoc, North Wales, Sept. 4. JOSEPH KELLOW.

#### MINING IN WALES—CAPT. KITTO AND CAPT. RIDGE.

SIR.—Being a constant reader of the Journal, I have observed lately a good deal about "Mining in Wales," especially in the district of Llanidloes and its vicinity. In the two last numbers there is great reference made to Capt. J. Kitto with regard to his management of mines in the Llanidloes district. May I ask what he has done? and especially may I ask what he has done at the Central Snailbeach Mines, Shropshire, that so much should have been said about it, and when that mine is to exceed the Old Snailbeach Mine in value? And I ask, without prejudice, what he has done in the Llanidloes district to award him so much praise? I always give praise to whom praise is due. I never wish to mar the character of anyone, yet this I know that Capt. J. Kitto came to Wales as successor to an eminent, skilful, and practical lead miner, and well known for his knowledge of mining in its respective departments; one who courageously opened his purse to assist his brains in releasing Brynystrof Mine out of Chancery, effectually supervised it, and made every discovery of lead that is now extant on that mine, although he had many obstacles to contend with. That gentleman is no other than Capt. Samuel M. Ridge, of Llanidloes; the very person who obtained a lease of Brynystrof for 21 years, and who has not yet transferred the original to the present company.

Having read in the Journal so much about Brynystrof and Mid-Wales (formerly called Cwm Fron), associated with the names of Captain J. Kitto and Mr. Job Taylor, of Dudley, I think those gentlemen—indeed, all concerned in the two mines—should at least have spoken of or to Capt. Samuel M. Ridge, of Llanidloes. It is, indeed, said that large amounts of lead were sold by Capt. S. M. Ridge; and it is true he made some returns from Cwm Fron Mine; but when Capt. J. Kitto states that "the deep adit at Cwm Fron has been driven for about 100 fms., and that at least half that distance had been ore ground," they should all consult Capt. S. M. Ridge, as he is the only person that drove through the ore ground in the deep adit and elsewhere in Cwm Fron, now called Mid-Wales, from whom those interested should elicit the truth. I hope in the driving of the deep adit that the lode is not too large to be lost since Capt. S. M. Ridge ceased to breathe in the mines.—Llanidloes, Sept. 2. A LLANIDLOES GLEANER.

#### THE SOUTH WALES INSTITUTE OF ENGINEERS.

SIR.—I perceive from a letter in last week's Journal that Mr. Lionel Brough takes exception to certain portions of the report of the late meeting of the South Wales Institute of Engineers, held in Swansea. Possibly a few inaccuracies might occur, but after having again carefully perused my notes, I do not think they can be of any special moment. When it is considered that the whole of the discussion was carried on in the most technical language, that Mr. Brough was, as he himself states, suffering from severe sore throat (which, in some instances, prevented his remarks from reaching the reporters); and, lastly, that there was no accommodation whatever afforded the representatives of the press (who were, therefore, compelled to scribble their hieroglyphics on their hats as best they may). When, I say, all these things are considered, I believe even Mr. Brough will agree with me when I say the great wonder is that the report is so accurate as it is.

The most serious objection taken by Mr. Lionel Brough is in reference to the after-dinner remark, in proposing the health of the President, when he made to say in the *Mining Journal* "that he (the President) would be equally esteemed in the other world, if he were only known there." Now, Mr. Brough seems to think this expression conveys the idea that he was speaking lightly or triflingly in reference to subjects of a serious or sacred character. But, Sir, I do not think that any other gentleman—either anyone who heard the remark, or anyone who might have seen it in print—would take the same view of the matter as Mr. Brough has. He has drawn an inference not warranted by the expression used. I believe the identical words used were—"I have to propose the health of a gentleman from whom there is no one more esteemed in this Welsh world, and who if he were known in the other world would be equally esteemed there—I mean the health of our esteemed President." I think the obvious—in fact, the only—inference fairly to be drawn from this expression is that by the "other world" is meant that which is not the "Welsh world"—the English scientific world, and that consequently there was nothing irreverent or implied in the report. I think this explanation only fair to Mr. Brough, and also to the Institute.

Sept. 3.

YOUR REPORTER OF THE MEETING.

#### MR. THOMAS CRADDOCK'S IMPROVEMENTS IN THE STEAM-ENGINE.

SIR.—The name of Mr. Thomas Craddock has been known to you and the reader of your valuable Journal for more than 20 years in connection with improvements of the steam-engine, and during that time Mr. Craddock has made statements which, if true, are of immense value and importance to the nation at large, and he has done all in his power to induce any of the public to either contradict these statements or to come forward and assist him to establish them for ever as positive realities. Hitherto all his efforts have been of no avail, although he has given the prime of his life, and has exhausted his means and his health, and is at this time incapable of obtaining a living. Yes, Sir, I can assure you that at this time such is Mr. Craddock's position, and, although none of the readers of the Journal could be induced to help him in his inventions, I cannot help thinking that some may be induced to render him assistance now, and place him beyond want, if you would kindly lay his case before them and the public. In case nothing of this sort is done, Mr. Craddock must inevitably add another instance to those who have gone before him of real benefactors of mankind being rewarded by poverty and starvation even to death, and to a nation's disgrace. Should any of your readers think what I say of Mr. Craddock's condition I shall be glad to correspond with them, and give them every proof of what I say. I will only add that I hope you will pardon me taking the liberty of asking for an early insertion of this (as it may otherwise be of no use), as nothing should have induced me to write this but a desire to save the life of a deserving fellow-creature.—30, Sheepcote-street, Birmingham, Sept. 4. W. MARLEW.

#### MINING NOTABILIA.

**GREAT WHEEL VOR.**—Very considerable improvements have taken place during the present week at these mines. A remarkable instance of sudden discovery occurred on Thursday last by the falling away of a piece of ground in the bottom level—the 2nd level of Metal shaft—and giving open a wonderfully rich bunch of ore. The levels west of Ivey's look very well. Altogether the mine is holding on well. The advance in tin is also a great boon to this mine.

**TAMAR VALLEY SILVER-LEAD.**—Capt. John Kitto, late of Great Laxey, writes:—I am not personally acquainted with this mine, but, judging from the specimens of ore from the 10 fm. level, which I have seen at the company's office, I am certainly of opinion that it is a very valuable property. I am free to confess that I have not seen more beautiful stuff from such a shallow level, or anything more likely to produce a large quantity of lead ore in depth, for a very long time.

**ROSEWARNE CONSOLS** prospects are again improving, and will eventually repay shareholders for their outlay. The lode in the 70, driving well, is now producing rich copper, worth 5s. per fathom, and as the end nears the counter it will increase in value. This mine is worth watching, as the district is known to have made large deposits of ore near the counter, and no doubt it will be the case.

**EAST NEPTUNE.**—The discovery of copper ore which was lately made in this mine continues to hold good. The agent writes that he is confident of laying open as good a bunch of ore as was formerly found in the adjoining mine, Old Wheel Neptune.

**WEST ST. IVES.**—Private information has been received by a large shareholder in this mine to the effect that not only were the prospects never better, but that they have a good course of tin in the end, and 50 fms. of high ground on it. The tollars are almost full of tin and copper, and this cannot be got up until the skip-road is ready. All this will, doubtless, be confirmed in the official report, which will be presented at the meeting of shareholders shortly to be held. The property altogether appears to be one presenting very satisfactory features, and, no doubt, will turn out to be one of great importance.

**AT LOVELL CONSOLS**, operations are being carried on with all speed, and any day may bring tidings of a valuable lode being discovered. This appears to be a very cheap property, and one that will eventually well repay the outlay; every agent who has seen it speaks very favourably of its success. One fact must not be lost sight of, and that is that the lodes passing through the set have returned over 1,000,000 worth of tin.

**AT EAST CHIVERTON**, Bartlett's shaft is down 45 fms., and a cross-cut is now being driven north to intersect West Chiverton lode, and from appearances there is every reason to anticipate its being found productive; indeed, when we consider the fine specimens of lead found near the surface, it would appear to be impossible that it should fail.

**DYFNGWYD MINING COMPANY.**—At a special general meeting of shareholders, on Wednesday, a resolution was passed confirming the resolution of the last meeting to wind-up the company.

**BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.**—The annual meeting commenced at Dundee, on Wednesday evening, when the Duke of Buccleugh was formally installed as President, in succession of Mr. W. R. Grove, Q.C., F.R.S. The inaugural address was an interesting one, and was received with much applause. The proceedings of the several sections were subsequently commenced by the delivery of addresses by the several Presidents. The Mechanical Science Section was opened by Prof. Rankine, who laid before the meeting an able summary of the researches which had been made since 1850. The Geological Section was introduced by Mr. A. Geikie, F.R.S., who, in the course of his address, remarked that distant or near the day would, doubtless, arrive when we shall be able to connect into one story, as far as at least as the fragmentary records will permit, the narrative of the varied volcanic eruptions which from early geological times have taken place in the British Islands, and to link that chronicle with the long history of volcanic action over the globe. The Economic Science Section was presided over by Mr. Grant Duff, M.P. The committee reported in favour of a uniform system of weights and measures. It was agreed that the monetary convention of France, Austria, Belgium, and Switzerland was a great step in the right direction. In a Supplement with next week's Journal the publication of such papers as bear upon subjects in connection with mining will be commenced, with Capt. Bedford Pim's paper on the railway through Nicaragua, read in the Geological and Ethnological Section.

## Meetings of Mining Companies.

### EAST SNAEFELL MINING COMPANY.

A general meeting of shareholders was held at the offices of the company, Old Jewry Chambers, on Wednesday.

Mr. W. TUXFORD in the chair.

Mr. THOS. THOMPSON, the secretary, read the notice convening the meeting. The accounts, as laid before the meeting, showed a balance of assets over liabilities of 13177 4s. 7d.

The following report from the agent was read:—

Aug. 31.—I have great pleasure in handing you the following report of the mine. At the time of your last meeting of shareholders the shaft had been sunk to a depth of 7 fathoms, close to the bed of the Glencherry stream, and about 50 fathoms south of its junction with the Kennay River; we here discovered a very promising looking lode, and judging from its position and bearing, as well as general character, I had reason to believe it to be the continuation of the main lode at Great Laxey, which opinion subsequent operations seem decidedly to confirm. We have driven an adit level southward from the Kennay River, and unwatered the shaft to a depth of 9 fms., continuing the adit about 8 fms. beyond it. We have also sunk below the adit 15 fathoms, and driven northward at this depth 10 fathoms; the result of this and other minor drivings lead to prove that from this shaft to the main river there exists an ore-producing lode, and I believe at no great depth from the surface profitable deposits of ore. From very careful observation of the dip of the ore-bearing ground, &c., I have started an engine-shaft close to the wheel, which I believe will hereafter be found in the best position for most readily developing and laying open the mine. This shaft is sunk vertically to a depth of 10 fathoms, where we have intersected a small quartz vein, spotted with lead and jacks; this appears to be only an off-shoot, or a portion of the main lode, and our course is simply to continue sinking perpendicularly to the depth requisite to drive out and meet the 15 fm. from the other shaft, which depth will be reached in about two months. I now come to an important matter, as to the plan of working for the next two or three months. It may appear strange that, with the wheel all in readiness, we should any longer be subjected to the expense of drawing water by manual labour at the south shaft, but I have to state, in the first place, that by keeping the south shaft clear of water we are enabled to sink the engine-shaft much faster and cheaper; and, secondly, that this shaft being so close to, and nearly on a level with, the centre of the wheel, it will be judicious as soon as we reach the 15 to put in a plunger-lift. By this arrangement we shall husband the power of the wheel, and better lay out the pitwork. In the 15 fm. level forehand there is now a very fine-looking lode, the main part being composed of quartz, killas, and lead ore, already worth of the latter about 1/2 ton per fathom, and looking unusually promising. In fact, from the appearances, I fully expect in a few fathoms further to lay open profitable tribute ground, which, considering the depth from surface, would have no parallel in the island, excepting Great Laxey and Foxdale. I expect the engine-shaft will reach this run of ground at a depth of 25 fathoms. In conclusion, I beg to repeat my conviction that Glencherry will one day make a first-class mine, and also that the present company, with energy and economy, have a very good chance of realising most satisfactory results, and I trust the value of the property will ere long be more certainly estimated by sales of ore.—W. H. ROWE.

The CHAIRMAN said he could congratulate the shareholders on the future prospects of the company. The samples of ore then upon the table, and which had arrived at the office that morning, put him in mind of Great Laxey. It only required for them to prosecute the mine with vigour to achieve a profitable result. Mr. THOMPSON said that Capt. Henry Rowe had told him years ago that he felt assured that the Glencherry lode, belonging to the East Snafell Company, was identical with the Great Laxey lode. And Great Laxey itself had not produced such splendid stones of ore at so shallow a depth. Capt. H. Rowe had always stated, also, that Glencherry would undoubtedly be a great mine, and had always advised him on no account to part with his interest in it.

The report and accounts were then adopted, and the retiring directors and auditor selected. A vote thanks to the Chairman concluded the meeting.

### EAST ST. JUST UNITED MINING COMPANY.

A general meeting of shareholders was held at the offices of the company, New Broad-street, on Wednesday.

Mr. HENRY L. PHILLIPS (managing director) in the chair.

The notice convening the meeting having been read, the reports of the directors and agents, and also the balance-sheet, were taken as read. An abstract was given in last week's Journal. They stated that the mines possessed by the company were being developed upon a very extensive scale, and that there is every prospect of realising a profitable result. The western engine-shaft, which is being sunk on Saveall's lode, is going down upon an excellent course of tin, and there is every reason to believe that the extension of the 90 upon this lode, east and west of the engine-shaft, will open up a very valuable and productive piece of ground. The directors believe these mines are now arriving at that depth where greater returns may be fairly expected, and they base their opinion as to this upon a comparison with the other principal mines of the St. Just district. The necessity for carrying on operations upon a large scale, at the same time with the utmost economy, has particularly engaged the attention of the directors, and they believe that the manner in which these mines are worked will favourably compare with any other progressive tin-producing mine in the county. The machinery is in good working order, two new axles for the stamps having been recently fixed, and the dressing-floors, which cover a great extent of surface, and embrace all the leading improvements in tin dressing, are capable of returning any quantity of ore which may be raised from these mines. The directors congratulate the shareholders upon the improvement which has taken place in the condition and prospects of their property, and they hope that, with a better price for their produce, and by a vigorous and economical development of the property, they will be able to announce the realisation of successful and remunerative results.

The report of the agents (Capts. Richard Pryor, R. P. Goldsworthy, and Richard Wearne) detailed the progress made at the different points of operation and the number of persons employed, and stated that the greatest depth attained is at Saveall's lode, on which the engine-shaft is sunk 30 fathoms below the adit, the adit being 25 fathoms from surface, making a depth from the surface of 115 fathoms. The lode is 5 ft. wide in the 90. A very important change has taken place in the character and value of the lode in the last 4 fms. sinking. This they most undoubtedly attribute to the intersection of Wheel Bozans lode, and it fully realises the expectations which were entertained of the value of this intersection, and seeing that we have opened the mine in the manner in which the lode is worked in tin ground, they conclude that it is the top of a very valuable deposit of tin, and most encouraging for further development in depth. The shaft will be sunk with all possible dispatch, and continue the driving of the 90 east and west upon the lode. In conclusion, they begged to state that, looking at the important improvement in the bottom of the mine, by the intersection of Wheel Bozans and Saveall's lode, should this retain its value in depth, which is very probable, as at this and deeper levels most of the neighbouring mines have made their valuable deposits of tin, and the chance of further improvement on the Buck, Reddipper, and other lodes, and the monthly returns, which realise a good return for the shareholders, and increase the same very considerably, and with an improved state of the tin market, would also be enabled to give to the shareholders a good return for their outlay.

The CHAIRMAN said it now became his pleasing duty to move that the report of the directors and balance-sheet be received and adopted, and in doing so he need only make a few brief remarks, simply because the position of the company was already more or less known to the shareholders, apart from the details set forth in the reports which it had just been agreed should be taken as read. He felt that upon the present occasion there could not be a divided opinion that he might fairly and honestly congratulate his co-shareholders, as well as his colleagues upon the board—each member of which held a considerable interest in the company—upon the results which they had achieved. He said that the position of the company was already more or less known to the shareholders, apart from the details set forth in the reports which it had just been agreed should be taken as read. 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A series of careful experiments have been made on the Monmouthshire Railway and Canal, and on the Great Western Railway, near the Vein Coal (small) locomotive working heavy mineral trains over severe gradients, by which it has been ascertained that increased duty was obtained from the fuel over the same coal. The results of these experiments are so satisfactory that Mr. Alex. Bassett, C.E., of Cardiff, has consented to act as the company's representative for granting licenses in South Wales, and will be happy to reply to all enquiries and give full explanation respecting the trials that have been made under his superintendence. The company are also engaged at Birmingham, and intend to undertake to represent the company in the Midland Counties, where large works are in course of erection in the Forest of Dean by the company's licensees there.

The company are prepared to grant licenses for the use of their patents, and from the success which has attended the manufacture at their own works, and the extraordinary popularity of the fuel for retail purposes amongst the lower classes, they believe that in every populous town a large and highly profitable trade may be carried on.

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Experiments have over some time past been in progress at Woolwich by the view to render petroleum and other analogous oils available for use under steam-boilers. The patentee's attention being directed to this fact, he found that the company's fuel, being porous, would rapidly absorb these oils, 1 ton of fuel taking up 50 gallons. This absorption does not in any way affect the solidity of the blocks, and it is believed they are the best medium for the purpose yet discovered, and that the fuel oil bricks will be an immense advantage to ocean steamers and vessels of war, on account of the vast saving in stowage and their steam-producing powers. The Admiralty have just granted permission for an official trial of the company's fuel to be made at Woolwich.

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The company will be happy to receive specimens of coal dust at their North Fleet Works, which will be manufactured and reported upon free of charge, and they will send a competent person to manufacture a small quantity of fuel at any colliery where the experiments may be desired.

For further particulars respecting license, terms, &c., apply to the company's representatives in their respective districts, or to the Managing Director, 26 Martin's-lane, Cannon-street, E.C., London.

By order,  
26, Martin's-lane, E.C. EDWIN W. GLOVER, Secretary.

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OIL PRODUCING MINERALS are UNDERTAKEN by  
A NORMAN TAYLOR, F.R.S.E.

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**G**REAT NORTH TOLGUS MINE COMPANY.—  
2000 shares of £10 each.  
Messrs. WALTER HARRISON and Co., of CROWN CHAMBERS, THREAD-  
NEEDLE STREET, LONDON, E.C., have received instructions to dispose of a  
limited number of these shares at par, 10s. payable on application, and 10s. on  
allotment.

The company's grant is situate in the parish of Redruth, in the county of Cornwall, and is held under licence from John Francis Basset, Esq., of Teldy Park, to Messrs. Francis William Michell, John Grenfell, and Richard Reynolds, on behalf of themselves and co-shareholders.

These mines were some short time ago sold for £10,000, and about £8000 have been expended in practical development, and in the erection of the necessary surface buildings, all of which are assigned to the present company, and payment taken solely in shares.

The mines immediately adjacent and surrounding the company's grant have proved highly productive and profitable, amongst which are the Wheel Mary, £85,000; the Treleigh Consols, £60,000; North Downs, £80,000; Great Briglan, £200,000; Great South Tolguis, £150,000; Tolguis, £240,000; South Tolguis, £130,000; Montague and Harmony, £243,000; North Pool, £150,000; Wheel Seton, £250,000; West Seton and £250,000; and the following highly promising undertakings: East Seton, West Tolguis, Wheel Rose, North Treskerby, Plenty, Cardew, and Emily Henrietta.

In case all the shares are not subscribed for, the money to be returned in full ; and no allotment will be given for a greater number than 50 shares to one applicant.

**FORM OF APPLICATION.**  
Messrs. Walter Harrison and Co., Crown Chambers, Threadneedle-street,  
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GENTLEMEN,—I beg to apply for \_\_\_\_\_ shares in the Great North Toluus Mine Company, and enclose you herewith the banker's account for £ \_\_\_\_\_, being a deposit of 10s. per share on the full number applied for, and I agree to accept the said \_\_\_\_\_ shares or any lesser number allotted to me, and to pay the further sum of 10s. per share on receiving the letter of allotment.

\_\_\_\_\_ Name in full length.....  
\_\_\_\_\_ Address.....  
Dated \_\_\_\_\_ 1867. \_\_\_\_\_ Description.....

**MODERN GOLD MINES.**—For a REVIEW of the POSITION of various STEAM, MISCELLANEOUS, and MINING COMPANIES, and General Remarks interesting to Capitalists and Shareholders, send addressed and stamped envelope to T. G. TAYLOR, Sworn Stock and Sharebroker, No. 11, Tokenhouse-yard, London, E.C.

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## Mining Correspondence.

## BRITISH MINES.

**BEDFORD UNITED.**—J. Phillips, Sept. 4: The stopes throughout the mine are without any alteration. The 90 and 75 fm. levels east, on the north lode, are being driven by the side of the lode. The stopes in the 75 fm. level east will produce from 3 to 4 tons of ore per fm. The lode in the 62 east is 3½ ft. wide, producing good work. The stopes in this level will yield 3 tons of ore per fm.

**BEDOL-AUR.**—H. R. Harvey, Sept. 5: The Brynia lode has not yet been intersected in the 100 fathom level cross-cut; the ground is changing, as if we were near the lode; it contains a great deal more spar than formerly. Jones's pitch is yielding about 15 cwt. of lead ore per fathom.

**BOTTLE HILL.**—J. Eddy, Sept. 5: The ground in the cross-cut now driving towards the north lode still continues favourable for driving; I think, by measurement, we shall cut the lode in about three weeks from this time. South Lode: The lode driving east in the 24 fm. level is now about 3 feet wide, composed of peach, prlan, munde, carrying copper and tin, but not to value. Judging from the character of the lode now in the present end, we may reasonably expect an improvement in the lode shortly. We have now a moderate supply of water both for drawing and stamping. The tributaries are now busily engaged in getting their dust; that was broken by them last month to surface; should the water continue as we have it at present we shall soon get it stamped, dressed, and prepared for market.

**B. ADDA.**—R. Barkell, Sept. 3: The ground in the old engine-shaft is without any material change since last week. The alterations made in the pitwork, together with the recent favourable changes in the ground, will enable us to sink at a cost of 10l. per fathom. We have a great change in the 40 north, on east lode; the former price for driving being 14l. per fathom, is now reduced to 8l. per fathom; the end is producing saving work for copper. It has been extended far enough now to drain the sump that was sinking below the 27, which sump we were obliged to suspend working on account of quick water. We shall now resume the sinking, and effect communication with the 40, after which we shall have a piece of ground available for stoping. We have also an improvement in the ground in Pryor's level, the price being curtailed 4l. 5s. per fathom. There is no apparent change in any of the other bargains. We have about 10 tons of lead on the mine, and a corresponding quantity of copper of good quality. The prospects of the mine are exceedingly encouraging, and there is every indication, as the mine becomes developed, of its being increasingly valuable. The pumping-engine and also the drawing-engine work very efficiently, and are of sufficient power to put the mine to a considerable depth.

**BRONFLOYD.**—Thomas Kemp, Sept. 4: Settings for September: South of new shaft, in the 63, we have cut into the lode about 11 feet; it is worth from 2½ to 3 tons of ore per cubic fathom; set to six men men, at 11l. 10s. per fm., sent 2 fms. The stopes under the 52 to ten men, at 62s. 6d. per cubic fathom; the lode is worth 2 tons per fathom. The stopes in back of the 52, west of winze, to four men, at 50s. per cubic fathom; the lode is worth 20 cwt. of lead ore per fathom. The stopes in the back of this level, east of winze, to four men, at 40s. per cubic fathom; the lode is worth 12 cwt. of lead ore per fathom. The stopes in the 40 east are breaking will remain under their feet until all the ore ground is taken away up to the bottom of the 40, which is sufficient to last them from nine to twelve months. There are still two men employed in securing the 40.

**BRYN GWOIG.**—S. Harper, Sept. 4: The lode in the 102, east of engine-shaft, is still large, 4½ to 5 feet wide, the south part of which is looking particularly promising, being composed of spar, blende, with fine deposits of lead ore. In the bottom of same level, west of winze, the lode is 4 feet wide, with good deposits of lead ore, but not regular. The same may be said of the run of ore in the bottom of the 102, east of No. 1 winze, the lode is 4 feet wide, with 3 tons of lead ore per fathom; the back of same level worth 4 tons per fathom; the winze and stopes in bottom of same level and about 20 fathoms behind the present end, are worth 2½ to 3 tons per fathom. The lode in same level, east of No. 3 winze, is 1½ foot wide, composed of lead, blende, and spar, worth 15 cwt. per fathom. We expect to meet with a bunch of lead in this end daily. The lode in the 75 west is still small, and at present very hard for progress; consequently, I do not expect a favourable change in the lode until I see a change for the better in the ground, which we shall have shortly. At the 66, east of engine-shaft, I have men at work, and a very favourable change in the lode, and present appearances I hope to see a greater improvement shortly. Bramwell's shaft is nearly completed from the 66 to the 75, but I have removed the men to assist the upper party to finish the skip-road, so that if we have good speed we hope to be in readiness to draw from the 105 yard level in about a week's time—that is if we can get our things from the foundry. Other parts of the mine much the same as for some time past. The lord's mineral agent has been through the underground operations to-day, and has expressed his entire satisfaction with the working of the mine.

**BRYN GWYN.**—J. Nicholls, Sept. 4: I have suspended the driving of lower levels south from incline, east of shaft, since the setting-day, and put the men to sink on the east and west point we lately intersected, and we have some very congenial ground, with small lumps of ore mixed through it. The driving going south from sump, in said level, is without any alteration to notice. The tributary has been working in the No. 2 level has removed, and taken a pitch in the levels going south from the middle of incline, where he is getting a little ore. The ore ground in the north part of Field's level being exhausted, the tributary has left it, so I have removed the two men who are working in the No. 3 level to raise a little ore from the south part of Field's level, and make some further trial in that direction. The tributary pitch, in bottom of old incline, continues to yield some fine lumps of ore going down eastward. There are two men working here now. We are going on with the dressing of the ore stuff we have broken as fast as possible, but, as we have no water except what we pump by hand, I am afraid we cannot get all the smalls dressed up in time for sampling. We shall have the engine, with all connected with it, ready for starting to work the beginning of next week.

**CAPE CORNWALL.**—R. Pryor, W. White, Sept. 4: The lode in the 100 east is at this time a little disordered by cross-heads, in which we see veins of granite, and, judging from present indications, we think we are near it, at which point a great improvement may be expected. The lode in the stopes in back of the 90 east is worth 4l. per fathom. The lode in the 70 west is large, and producing some good copper ore.

**CARADON CONSOLS.**—S. Bennetts, Sept. 3: The south shaft is not as yet communicated with the rise; a large portion of the water from the former is now issuing from the latter, and this, coupled with the bad air, has effectually prevented us from doing anything towards hoisting this ground, but in the shaft we are doing all we possibly can to improve the bottom west end, and slightly improved since last week, and is now worth 10l. to 12l. per fathom; lode 2½ ft. wide.

**CARDIGANSHIRE LEAD.**—E. Pearce, Sept. 5: Glan Rhedol Mine: The lode in the 40, east of engine-shaft, is worth 1 ton of lead ore per fathom, for the part carried—5 ft. wide, the lode altogether being from 15 to 18 ft. The lode in the 40 west is about the same size and value as the east, and I fully expect an improvement in this level ere long, as there are several branches that will form a junction with the lode. The 40 cross-cut south is full of stuff, and suspended for the present; the ground in the end shows indications of the lode being near. The lode in the 40 east is now driving north in search of the lode. The rise above the 65, at the flat-rad shaft, is 7 fms., and has not intersected the lode. The winze sinking below the 50, at the flat-rad shaft, is worth 7 cwt. of lead per fm. **CLARA UNITED.**—J. Davis, Sept. 4: Llywernog: The mine is drained to 2 fathoms under the 50, and we have to-day resumed crushing.—Settings for September: Stopes No. 2, in the back of the 50, to two men, at 65s. per fathom; value for lead 15 cwt. per fathom. Stopes No. 3, to six men, at 65s. per fathom; value 20 cwt. of lead per fathom. The 40 to drive west, to four men, at 140s. per fathom; the lode is small, but I have reason to believe there is a productive lode in advance of this end. The stopes in the back of this level is set to four men, at 65s.; the lode is worth 20 cwt. of lead per fathom.

**CRELAKE.**—W. Skewis, W. Hooper, Sept. 5: The lode in the 74 west is 2 feet wide, composed of munde, spar, and good sprigs of copper ore; this lode is improving in value as we drive westward; we believe it will be as productive as the 65 on getting under the point where the ore was met with in that level, in from 8 to 10 fms. more driving. The lode in the rise in the back of the 62 west is 3 feet wide, worth from 10l. to 12l. per fathom. The lode in the stopes in the 50 west is 2½ feet wide, composed of munde, capel, and copper ore. The lode in the 10l. per fathom. The lode in Williams's, or No. 1 stopes, in the back of the level, is 2½ feet wide, worth 6l. per fathom. In the new, or No. 2 stopes, in the back of this level, the lode is 4 feet wide worth 14l. per fathom. The lode in the winze, sinking below this level, is 4 ft. wide, worth 7l. per fathom. The lode in the 40 west is 3 ft. wide, containing munde, spar, and copper ore; the end is very wet, and looks more promising than we have seen it for several fathoms driving. The western, or Darf's rise, in the back of this level, is at the required height to communicate with the 28 fm. level, and the men are put to drive east for that purpose on a lode worth from 9l. to 10l. per fathom. The lode in the stopes in the back of the 40 is 4 feet wide, and worth 12l. per fathom. The lode in the 28 west is 1½ foot wide, composed of munde and spar; we are not certain that this end is on the right part of the lode, but expect to ascertain before the next report.

**CROWAN AND WENDRON.**—R. Reynolds, Sept. 3: The north part of the lode in the shaft is about 15 in. wide, producing occasionally good stones of tin; the horse of granite in it is wearing out fast. The lode in the winze is increasing in size, and looks more promising for tin than I have yet seen it. I hope by the latter part of the week the adit level east, on the south lode, will be cleared and secured to the end.

**DEVON AND CORNWALL UNITED.**—T. Nell, Sept. 3: George and Charlotte: The lode in the 24 east is much the same as last reported.—William and Mary: In the 46 east the lode is much the same as for some time past. The lode in the 34 east is 3 ft. wide, but at present is not producing ore enough to value. In the 34 west we have cut the cross-course. The lode in the 22 west is 3 ft. wide, producing good stones of ore. The pitches are producing fair quantities of ore.

**EAST BOTTLE HILL.**—J. Eddy, Sept. 5: In driving east of the western shaft, in the 10 fm. level, the north and south branches have formed a junction, and the lode is much larger than we have had it for some time past; now full 5 ft. wide, and producing saving and stamps work.

**EAST GUNSLAKE.**—James Phillips, Sept. 6: Since the report of the meeting we have met with another branch in the 54, but we are not yet through it. The lode in the shallow adit is not quite so large, and being more sparry, is not

so good for ore; it, however, contains some very good stones of ore, and is also another look-very promising.

**EAST LOVELL.**—R. Quenrall, Sept. 4: North Lode: The stopes in the back of the 45, west of shaft, is worth 12l. per fathom. The eastern stopes is worth 25l. per fathom.—South Lode: In the winze sinking below the 40 the lode has improved, now worth 80l. per fathom, or upwards. The stopes in the back of this level is worth 30l. per fathom.

**EAST NEPTUNE.**—P. Floyd, Sept. 5: In the 25 fm. level cross-cut, driving north of Hosking's shaft, we have cut into the lode about 7 ft., and find it to be of the same character and appearance, and producing splendid stones of rich grey and yellow copper; and, from the present indications of lode, &c., I should say that we are not far distant from a large deposit of ore; we have now about 5 ft. more to drive to reach the north wall of the lode; when done I shall be in a position to give you the value, size, &c. At Hosking's shaft the shaft-men have been engaged in cutting pit, putting in penthouse, &c., in the 25 fm. level, which will be completed by the end of this week, when we shall with all vigour resume the sinking of the shaft to the deep adit, which is about 10 fms. The winze sinking below the 15 fm. level is communicated to the 25 fm. level, and we have now commenced to stopes east and west of the said winze, on the course of the lode, which is producing good saving work for copper, and of a most promising appearance to improve. All the other work is progressing very favourably.

**EAST ROSEVARN.**—C. Glasdon, Sept. 5: In King's shaft, sinking below the 95, the lode has very much improved; it is now 12 in. wide, worth 6l. per fathom. In the 95, east of King's shaft, the lode is very much the same as reported last week, 15 in. wide, worth 6l. per fathom. In the 95, west of King's shaft, the lode is small and poor. In the 85, west of King's shaft, the lode is 10 in. wide, worth 6l. per fathom. The lode in the rise in the back of this level is 10 in. wide, worth 6l. per fathom.

**EAST ST. JUST UNITED.**—R. Pryor, R. P. Goldsworthy, R. Wearne, Sept. 4: Eastern Mine: At Phillip's engine-shaft, sinking below the 30, the lode is without change; ground spare for sinking. The 20, driving east, on Agaworth lode, is producing occasional stones of tin. The 20, driving west, on Agaworth lode, is without change.—Western Mine: At Savell's engine-shaft, sinking below the 90, the lode is worth 15l. per fm. The lode in the 90 east is worth 12l. per fm. The lode in the 90 west is worth 10l. per fm. The lode in the 75 west is worth 10l. per fm.—Buck Lode: The lode in the 62 east is without change.—Owl Lode: The lode in the 40, north from Reddipier shaft, is worth 5l. per fathom. In the 20, north from Savell's, the lode is without change to notice. The lode in the 20, north from West Buck shaft, is producing saving work. The lode in the 10, north from same shaft, is worth 6l. per fathom. The 10, north from same shaft, is worth 6l. per fathom. The adit, north from West Buck shaft, is worth 3l. per fathom, and is promising for improvement.—North Lode: The lode in the 20 east is worth 5l. per fathom.—Reddipier Lode: The 20, driving east, is producing good stones of tin; the lode is very promising.

**EAST TRUMPET.**—R. Quenrall, Sept. 5: This mine is opening out better than I expected. The lode in the engine-shaft sinking below the 60 is producing good stones of tin; and in the 60, driving west, the lode is 14 in. wide, yielding good stamping work. In the winze-shaft, sinking below the 25, the lode is worth 10l. per fathom; sinking by six men, at 6l. per fathom.

**EAST WHEAL AGAR.**—W. Johns, J. Williams, Sept. 2: We have recently cut a lode in the 45 cross-cut, south of Dunsford's engine-shaft, which is about 4½ ft. wide, and is producing a little tin, and a very kindly appearance. The lode is in the influence of the cross-course; it is chiefly capel and flookan, and letting out water pretty freely. We shall be able to say more about it after another 6 ft. are driven. In the 30 cross-cut, south of Hext's lode, we have driven in the past month 5 fms. The ground is still good for progress, and this end is fast approaching towards the lode seen in the costean pit at surface, in the junction of killas and granite.

**EAST WHEAL GRENVILLE.**—G. R. Odgers, W. Bennetts, Aug. 31: Setting Report: The engine-shaft is sunk 14 ft. below the 95 fm. level, and the lode is 4 in. wide, yielding a little tin, and a very kindly appearance. The 95, to drive east of engine-shaft, by four men, the month, at 50s. per fathom; the lode is 4 ft. wide, yielding copper ore and tin to the value of 8l. per fathom, and looks promising to be near a bunch of ore. The 95 west to four men, the month, at 50s. per fathom; the lode is 15 in. wide, yielding a little ore and tin, but not at present to value. The stopes above this level by four men, the month, at 45s. per fathom; the lode is worth 2 tons per fathom. The stopes from the east by two men, at 42s. per fathom; lode worth 1½ ton per fathom. The winze to sink below the 95 west by four men, the month, at 120s. per fathom, and is opening out, and is producing a bunch of ore, and is in the 130 north rise, 4½ ft. wide, worth 10l. per fathom. The 75, to drive east of the shaft, by four men, at 180s. per fathom, where there is a small branch of copper ore about 4 in. wide; here we are anticipating a change. A stopes above the 45 by two men, at 40s. per fathom; the lode is worth 4l. per fathom.

**G. R. Odgers, W. Bennetts, Sept. 4:** Everything is being forced on with the utmost expedition, but we do not see anything calling for remark since Saturday.

**EAST WHEAL RUSSELL.**—Wm. Richards, Sept. 4: We have not yet cut through the middle lode in the 150 cross-cut; it is wider here than expected. The lode is 4 in. wide, yielding a little tin, and a very kindly appearance. The 150, to drive east of engine-shaft, by four men, the month, at 50s. per fathom; the lode is 4 ft. wide, yielding copper ore and tin to the value of 8l. per fathom, and looks promising to be near a bunch of ore. The 150 west to four men, the month, at 50s. per fathom; the lode is 15 in. wide, yielding a little ore and tin, but not at present to value. The stopes above this level by four men, the month, at 45s. per fathom; the lode is worth 2 tons per fathom. The stopes from the east by two men, at 42s. per fathom; lode worth 1½ ton per fathom. The winze to sink below the 95 west by four men, the month, at 120s. per fathom, and is opening out, and is producing a bunch of ore, and is in the 130 north rise, 4½ ft. wide, worth 10l. per fathom. The 75, to drive east of the shaft, by four men, at 180s. per fathom, where there is a small branch of copper ore about 4 in. wide; here we are anticipating a change. A stopes above the 45 by two men, at 40s. per fathom; the lode is worth 4l. per fathom.

**FRANK MILLS.**—J. P. Nicholls, J. Cornish, F. Cornish, Sept. 4: The lode, in the 145 north, continues to yield good saving work at times, and opening out ground that will be stoped at a profit. The stopes in the back of this level, on the same lode, is producing ½ ton of lead ore per fathom, and improving as we progress. The 145, to drive east of engine-shaft, by four men, the month, at 50s. per fathom; the lode is 4 ft. wide, yielding copper ore and tin to the value of 8l. per fathom, and looks promising to be near a bunch of ore. The 145 west to four men, the month, at 50s. per fathom; the lode is 15 in. wide, yielding a little ore and tin, but not at present to value. The stopes above this level by four men, the month, at 45s. per fathom; the lode is worth 2 tons per fathom. The stopes from the east by two men, at 42s. per fathom; lode worth 1½ ton per fathom. The winze to sink below the 95 west by four men, the month, at 120s. per fathom, and is opening out, and is producing a bunch of ore, and is in the 130 north rise, 4½ ft. wide, worth 10l. per fathom. The 75, to drive east of the shaft, by four men, at 180s. per fathom, where there is a small branch of copper ore about 4 in. wide; here we are anticipating a change. A stopes above the 45 by two men, at 40s. per fathom; the lode is worth 4l. per fathom.

**GAWTON COPPER.**—George Rowe, George Rowe, Jun., Sept. 2: We beg to hand you our report for the general meeting, to be held on the 4th inst., showing the present and improved position of your property during the past four months. The engine-shaft is sunk perpendicular 12 feet long and 6 feet wide, to the 70, where a cross-cut, in the north, has been made, and is yielding a good deal of ore, and is producing a bunch of ore, and is in the 130 north rise, 4½ ft. wide, worth 10l. per fathom. The 75, to drive east of the shaft, by four men, at 180s. per fathom, where there is a small branch of copper ore about 4 in. wide; here we are anticipating a change. A stopes above the 45 by two men, at 40s. per fathom; the lode is worth 4l. per fathom.

**GLASGOW CARADON.**—W. Taylor, Sept. 3: There is no change in the 75 fm. level west. In the cross-cut south at this level we have favourable ground, which we shall push on to the new lode as fast as possible. The 65 west is worth 15l. per fathom. The 65 west is worth 10l. per fathom. The 65 east is worth 10l. per fm., opening out a very fine looking lode, in a good channel of ground. We shall resume the cross-cut south of this lode to the south lode of East Caradon at our next setting; we expect we have 5 or 6 fms. to reach it. This lode produces the best quality ore, and is a very important point to be looked for here. We are getting on favourably with dressing ore for next sampling, and shall be able to give you the computed quantity in next report.

**GOTHIC.**—J. Lester, Sept. 4: On Saturday I paid the men, July cost, and all the month's work. The men are sinking the cross-cut north of the 30, to the 40, to meet the north lode. Six men are sinking winze below the 30; the lode is very strong, composed of quartz and clay-slate, and yielding about 10 cwt. of lead ore per fathom, with every appearance of a much greater yield soon. Six men

are driving the 40 east for a bottom; the lode still contains lead ore, but at present we have not reached the new ore ground—we have several feet, but to drive.

**GREAT NORTH DOWNS.**—William Rich, Cornelius Bawden, Sept. 4: The lode at Sleggan's shaft, below the 86, has an improved appearance, now worth 30l. per fathom for the length of shaft. The 86 east is worth 8l. per fathom. The 86 west is worth 30l. per fathom, and ground easy for driving. The stopes in the back of this level are worth 10l., 15l., 18l., and 30l. per fm. respectively. The 70 end west carries excellent stones of ore, and the ground somewhat easier for driving than it has been. The stopes in back of this level is worth 12l. per fathom. We are cutting through the lode in the 60, east of Butler's shaft, the 70, east of Butler's shaft, is worth 15l. per fathom.

**GREAT NORTH LAXEY.**—R. Rowe, Sept. 4: The lode at the engine-shaft, sinking below the 84, is improving; it is now nearly 3 ft. wide, and producing some rich stones of ore; the shaft is now down 11½ fms. below the 84 fm. level. In the 84 end, driving north, the lode is about 2 ft. wide, worth about 5 cwt. of lead per fathom. The stopes in the roof of the same level are worth 1 ton of lead per fm. The lode in the 73 south is improving, and I expect we are drawing near to the shoot of ore ground in the 60, the stopes in the roof of which are worth 1 ton of ore per fm. A few days after the new wheel went to work we had a stoppage for a couple of days, owing to a crack in one of the main shafts, probably occasioned by a flaw in the casting; this was instantly attended to, and the wheel has been regularly at work since, without any further sign of failure. We sample 40 tons of lead on Friday next.

**GREAT RETALLACK.**—G. R. Odgers, J. Harris, Sept. 4: No. 1 shaft is sunk 11 fms. below the 9; it will take the men about a week before they commence to drive the cross-cut towards the lode; we calculate they will have about 12 feet to drive, and which with good speed will be done by Saturday week, when we can look for lead. No. 2 shaft is sunk 3 fms. below the 20. In the 20 the western part of the lode went out of the shaft; we have just picked it, and we are expecting in our next to advise you of its being in the shaft again: the killas certainly looks favourable for lead, and in the bottom of the 20, where the lode was last seen, it would produce fully ½ ton of good silver-lead to the fathom. We have, therefore, strong expectations of meeting with a productive lode. The western part of the lode, in the 20, is 18 in. wide, principally quartz; we have to-day placed the men to cross-cut east through the horse, to see if the eastern part of the lode may not prove to be the main part. The lode in the stopes above this level will produce ½ ton of good silver-lead to the fathom; this stopes is turning out very well indeed. The lode in the 20 north is 18 in. wide, producing good silver-lead—a most promising lode, and laying open good ground for stoping. We have to-day placed a pair of men to rise above this level, against No. 1 winze north, below the 10, where the lode will produce 6 cwt. of lead per fathom; here we are strongly of opinion that we shall meet with the bunch of lead that passes through the shaft. The lode in the 10 south is 18 in. wide, with stones of silver-lead. There is no change in the 10 north; the stopes above this level will produce 5 cwt. of silver-lead to the fathom. We are getting on very well with the dressing for another sampling.

**GREAT SOUTH CHIVERTON.**—J. Nancarrow, J. George, Sept. 2: The lode in Gifford's engine-shaft is 7 feet wide, carries a strong flookan, contains a great deal of carbonate of lime, and more munde than usual, and is altogether one of the most promising lodes for the production of lead that can be seen. The south lode, in the 30 west, is larger than it was last week, and the end is letting out more water. There is nothing yet reached in the 30 cross-cut north. The lode in the winze below the 30 looks as well as ever, especially in the ground stopped down in the west end of it, but the water is increased, so that it will be suspended for the present; still we hope that our operations in the 30 will soon drain off this water, and enable us to resume the sinking.

**GREAT SOUTH TOLGUS.**—J. Daw, Sept. 4: I am glad to inform you that this mine is drained to the 160, or bottom level, and all of the copper and tin tribute pitches are again in full course of working. In the 140, east of Noel's shaft, the lode is 2 feet wide, producing 4 tons of ore per fathom. In the 140, east of Noel's shaft, the lode is 2 feet wide, producing 1 ton of ore per fathom. Altogether the mine is progressing favourably.

**GREAT WHEAL BADDERN.**—R. Pryor, H. Tregoning, Aug. 31: We have no change to notice in the 75 cross-cut, driving south from Hill Brothers engine-shaft, during the week, except a little more water coming out of the end. In the 75 end, driving west from the cross-cut, on the Baddern lead lode, the ground has a little improved, and the lode looking better, now about 2 to 3 feet wide, containing munde, blende, flookan, spar, and spots of silver-lead. The water is still increasing as we make progress towards the old mine.

**NEW BIRCH FOR AND VILFELD.**—W. Trelease, Sept. 2: Hambly's Shaft, North Lode: The lode in the 45 east is 1 ft. wide, worth 4l. per fm.; set to four men, at 4l. per fm. The plat is completed in the 36 fm. level, and set to four men, at 3l. per fm.; lode 6 ft. wide, composed of spar, iron, and a small quantity of tin. I have not seen such a fine looking lode in the mine; we cannot yet say what it will do for us. We set on Friday seven pitches, at tributes from 8s. to 15s. 4d. in 1l.

**NEW CLIFFORD.**—W. Michell, Sept. 5: Holland's Engine-shaft: We are still vigorously pushing on the cross-cut, and, as the ground is much improved for driving, we shall progress much faster than for the last two months; it is still a good mineral-producing stratum, containing in places green carbonate of copper in the divisions of the rock, so that there are good reasons for believing that the lode will be cut soon, and when cut will be a good one. At Weston's shaft the sinking is going on satisfactorily, and the lode when last taken down produced some rich stones of tin; it is of much the same character as when last reported on. I have not the slightest doubt that we shall find this to be a rich lode when we get a little deeper.

**NEW CROW HILL.**—W. Trelease, Sept. 3: We are going on with the cross-cut towards the lode in the 70 as fast as we can, but the ground is hard and wet. The lode in the new winze, below the 55, is at present much disordered, and is carrying a good deal with flookan, &c., and requires to be heavily timbered; it is carrying a beautiful footwall, but showing no ore to notice. The lode in the old stopes No. 1, above the 35, does not look so well as last week, but still shows a very pretty lode, and worth in places 15 or 16 cwt. of ore per fm. The new stopes above the 35, and adjoining the last named at the west, but not so high by many fathoms, has much improved in the last few days, and is now worth 15 cwt. of ore per fm. The lode in the 35, west from the cross-cut in the bottom of Louisa shaft is still producing some fine stones of ore, and at this moment is kindly. There was no ore in this part of the lode where we passed through it in the shaft, which shows a very great change in it from that point down to the levels now driving on it. I sent on yesterday a small cask of specimens, broken a day or two ago from the present point of operations, which will show you something of what we now have in the ends at the deepest point in this part of the mine. This great lode altogether is over 20 feet wide, and is mineralised throughout; and one cannot help thinking that it is almost sure to contain large quantities of ore in depth.

**NEW TRELEIGH.**—Sam. Michell, Sept. 4: The 70 end, west of new shaft, is looking a little better than it did last week, and the water very powerful, which is generally the case before we meet with ore. The 60 is more kindly, and the lode opening wider. The 40 is much the same as for some time past, producing munde and ore. The stopes are without change.

**NEW WHEAL LOVELL.**—C. Bawden, J. Priske, Sept. 2: The engine-shaft is made good to the 62, and the necessary casing and dividing fixed; the men are now in course of driving the ends east and west in this level. The 50 fm. level, east of engine-shaft, is looking a little better, and the lode at present unproductive; there is, however, a change taking place in the nature of the ground, which we view as a very favourable feature for the production of tin. The lode in the 40 east is still worth from 6l. to 8l. per fm., and ground coming easier. The lode in the winze sinking below the 40 is worth, at least, from 15l. to 18l. per fm., with every prospect of further improvement. The lode in the rise in the back of the 40 is less productive than when last reported on; there is still a good lode in the eastern part, worth about 15l. per fathom. We are not getting on with the dressing as fast as could be desired, in consequence of the falling off of the surface water at the stamps, which will now only admit of the working of four heads instead of eight, and consequently an accumulation of stuff, and a consequent stoppage of the lode.

**NEW WHEAL TOWAN.**—R. Pryor, Sept. 4: The lode in the adit level, driving west, is producing stones of copper ore, and looking promising for further improvement.

**NORTH POOL.**—Jos. Vivian and Son, F. Clymo, Sept. 5: Middle Lode: In the 40 fm. level, east of sump, the lode is 2 feet wide, composed principally of quartz, of a congenial nature for copper ore, which is disseminated throughout it. In the 40 fm. level, west of sump, the lode is contracted, but contains copper ore, and is likely soon to open again. Ballarat Lode, in the 40 fm. level, west of Ballarat shaft, is entering a better looking stratum, and improving.

**NORTH RETALLACK.**—G. R. Odgers, Sept. 4: The lode at the No. 1 boundary shaft is from 15 to 18 in. wide, producing rich silver-lead, embedded in a good gossan; the stratum is of a light blue killas, therefore, in my opinion, the indications here are very favourable indeed for being on the top of a bunch of lead. This shaft is only 7 fms. deep, and I calculate we have at least ½ ton of good silver-lead broken from it. I am thinking on Saturday to place two men more at this shaft, so as to get down for a level; when, if we can have the same kind of lode, we shall shortly commence dressing. The lode in the No. 2 boundary shaft is from 1 ft. to 1½ in. wide, with strings of lead, also embedded in a good stratum.

**NORTH SHEPHERDS.**—H. Bennetts, Sept. 5: There is no particular change in the 50, west of the engine-shaft; the lode is at present small, and the ground spare for driving. The rise in the back of the 40, rising against Rye's shaft, is up 7 fathoms; the ground is much as usual, and the lode contains lead, but not to value. The lode in the 30, west of Rye's shaft, is 2 feet wide, and a little improved in appearance. In the 20 cross-cut, south of the flat-rad shaft, the ground is spare, and letting out water more freely, and the indications bespeak that the lode is not far distant, but it will entirely depend upon the underlie of the lode, and I assure you no time will be lost in seeing the lode. Our engine consumes about five strokes per minute to keep the mine drained, and our consumption of coals during the past month has been about 25 cwt., for 24 hours.

**NORTH TRESKERY.**—J. Tregoning, T. Jenkin, Sept. 5: The lode in the 120 fm. level, driving east of engine-shaft, is 3 feet wide, composed of peach, spar, munde, and stones of copper ore. The lode in this level west is 3½ feet wide, composed of capel and spar, and spare for driving.—Treider's Shaft: The lode in the 130 fm. level, driving east of the shaft, is 4½ feet wide, which is carrying a branch of ore on the north side, producing 1 ton of ore per fathom—a kindly lode. The lode in the 120 fm. level, driving east, is improved, now 5 ft. wide, worth 25l. per fathom for copper ore, and driving by six men, at 4l. per fm. The lode in No. 1 stopes, in the back of this level, is worth 16l. per fathom. The lode in No. 2 stopes is worth 15l. per fathom. There is no change in the 120 fm. level, driving west. The lode in the 110 fm. level, driving east, is 2 feet wide, producing a little copper ore, but not sufficient to value. The lode in the winze, sinking in the bottom of this level, is worth 16l. per fathom. The lode in the 100 fm. level, driving east, is 4 feet wide, and daily improving, now worth 9l. per fathom, with every appearance of a further improvement. All other places without change to notice. We expect our sampling next week will be from 250 to 300 tons of good quality copper ore.

**OKHAMPTON.**—J. Richards, Sept. 3: The shaft (engine-shaft) is in a fair course of sinking; we have some branches in the shaft composed of quartz, munde, &c.; this somewhat impedes the progress, but we have succeeded in sinking 2 fms. 1 ft. 6 in., making the total depth below the 14 fm. level 22 fms. 2 ft. 6 in. The men are working with spirit, and from early on Monday mornings till late on Saturday nights, night and day, not a moment is being lost.

**OKEL TOR.**—J. Rodda, Sept. 5: The south lode, in the 80 east, is looking very promising, and producing good stones of ore. We have intersected the south lode in the 65 cross-cut, and are driving the cross-cut north of the 30, to the 40, to meet the north lode. Six men are sinking winze below the 30; the lode is very strong, composed of quartz and clay-slate, and yielding about 10 cwt. of lead ore per fathom, with every appearance of a much greater yield soon. Six men

$\frac{d}{dt} \left( \frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$

$\frac{d}{dt} \left( \frac{1}{\rho} \right) = - \frac{1}{\rho^2} \frac{d\rho}{dt}$

who reads it, whilst the illustrations which accompany it will almost serve as puzzles from the difficulty of distinguishing the representations of animal life from those of vegetable life, although they are beautifully printed, and guaranteed to be faithful with regard to each. The articles—*Primer of Britain*, *Bitten by a Viper*, *Toadstools*, &c., are all highly instructive; whilst the chronicles of scientific progress, notes and queries, and notices to correspondents each contain a large amount of information.

**MINING ASSOCIATION (Limited).**—This company has been registered, and is in 25,000 shares, of 2s. each. A large portion of the shares have been allotted to upwards of 175 of the shareholders in the Mineral Rights Company, who receive shares, with 1s. paid, in exchange for a transfer of their interest in that company. More are expected to join, and any shares remaining will be offered to other parties, as occasion may arise. It would not be possible to enter into parties, as occasion may arise. It would not be possible to enter into parties, as occasion may arise. It would not be possible to enter into parties, as occasion may arise.

**CHONTALES COMPANY.**—There are so many enquiries as to the position of the different classes of shares in this company, while even many of those who think they understand it are mistaken, that a reliable explanation of the subject must be very acceptable and useful. It will be seen by our advertising columns that full particulars can be obtained on application to Mr. J. H. Murchison, of 8, Austinfriars, and no one is more competent to explain the matter correctly. As is well known, Mr. Murchison originated the Foreign Lands Company, in conjunction with Captain Pim, nearly the whole of the capital of that company having been obtained through him; and, again, a very large portion of the Chontales capital having been raised through his instrumentality, when the properties were transferred to that company. Mr. Murchison's intimate connection with the progress of the undertaking, from the moment when it was first suggested to examine the district with the aid of an experienced mining engineer, renders the information he possesses peculiarly valuable.

**THE PESTARENA UNITED GOLD MINING COMPANY.**—The directors have received the 10 bars of gold, weighing 1062 ozs., the produce of their last smelting, and which, under the circumstances mentioned in their report, published this day, must be considered most satisfactory and encouraging.

**DON PEDRO NORTH DEL REY GOLD MINING COMPANY.**—It is satisfactory to find that the unscrupulous attempts now being made by the circulation of unfounded statements to induce shareholders to dispose of their interest in this company have proved signal failures, and would have resulted in a heavy loss to the chief movers were they in a position to meet their differences. The able and lucid speech of the Chairman (Mr. H. Haymen), as reported in last week's Journal, has conclusively proved to the shareholders that they not only possess a valuable property, but that it is being legitimately and successfully developed. As will be seen by a reference to another column, the produce for July amounted 1442 ozs. of gold, which leaves a considerable profit on the month's operations; and that there had been forwarded for delivery to Messrs. John Moore and Co. four boxes, containing 3408 ozs. of gold. Replying to a circular which has been forwarded to the shareholders, the Chairman has contented himself by simply making an official announcement to the effect that "the statements made therein are entirely false, and without foundation."

**FRONTINO AND BOLIVIA (SOUTH AMERICAN) GOLD MINING COMPANY.**—Subsequent to the receipt of the advices (referred to in last week's Journal) letters have come to hand confirmatory of the news that the political disturbances have been completely quelled. Apart from the fact that the returns from the mines are more than equal to the costs, the company is in a very satisfactory financial position, and within the next two or three months substantial remittances may be expected.

**CHONTALES.**—We understand that Mr. Truran, who is reported to be in good health, is expected to arrive in London in the course of next week. Whatever remittances there may be from the mines, it will, of course, come by the regular West Indian mail.

**THE TIN TRADE.**—Messrs. Von Dadelzen and North (Sept. 4) write—In anticipation of the Dutch sale it may be of advantage to have the statistical position of tin compared with the two preceding years, together with information as to its production, and the prospects of its consumption for the future. On going through the figures we cannot but consider that the article is in a very favourable position. The aggregate stock of Banca, Billiton, and Straits tin, including Straits afloat, shows a very large reduction as compared with the corresponding period of the two preceding years:—

	Sept. 1, 1867.	Sept. 1, 1866.	Sept. 1, 1865.
Aggregate stock .....	Tons 10,130	Tons 11,922	Tons 11,538
Straits .....	490	482	499
Banca .....	425	485	490
Stock—London .....	Tons 2296	Tons 2762	Tons 3410

As regards the production of tin—it is now generally acknowledged that the Cornish Mines this year have fallen off about 2000 tons, or one-fifth of their yearly production, thus entailing an important diminution in English tin. With regard to the production of Banca, the following extract from a Java paper of July 14, shows the particulars of the serious falling off in the production to which we have alluded before. The production of Banca tin shows an enormous falling off during the first five months of the year, as compared with those of 1866:—

	1867.	1866.	1865.
January .....	Pekuls 122	Pekuls 594	
February .....	388	1540	
March .....	302	1873	
April .....	1069	2859	
May .....	770	5381	
Total .....	2651	13,247	

Regarding the production of Straits, the mail has brought the news of riots among the coolies at Junk, Ceylon, and Tongka—tin-producing islands—which will probably have, at any rate, a temporary effect upon the production, and we have just learnt, per telegram from Galle, the price has gone up half-a-dollar per pekul. As regards the consumption of tin, on Jan. 1, our stock in London consisted of 3456 tons, to which we must add arrivals of 163 tons of Banca, and 2530 of Straits; making a total of 6142 tons. If, then, from this we deduct our present stock of 2296 tons, we shall find that we have delivered off for consumption and export during eight months 3847 tons, or nearly at the rate of 6000 tons per annum. This is altogether unprecedented; still we see no signs of any falling off in the deliveries, as those for the past month were upwards of 600 tons alone, or above the average of the preceding eight. Looking, then, at all these facts, we cannot but come to the conclusion that the position of tin is inherently sound, so that there is little likelihood of any important relapse in prices, while there is great room for improvement. The value of the article now is 25 per cent. less than the average of the last ten years. The expansion of the tin-plate trade continues, demanding an increased consumption of tin; while the cheapness of money, the prospects of a favourable harvest, and peaceful assurances abroad, should all have a beneficial effect upon trade, and lead us to expect a satisfactory conclusion to the fresh campaign on which we are about to enter. The quantity of tin here and in Holland on Aug. 31, was as follows, compared with the three preceding years:—

	1867.	1866.	1865.
Stock in Holland .....	128,306=4035	97,850=3130	141,619=4520
Arrived for next sale .....	64,416=2060	136,586=4355	98,900=3200
Billiton in Holland .....	300	400	—
Stock here .....	2295	2762	3410
Total tons .....	8699	10,647	9290

The quantity of tin now afloat for England is 1622 tons, against 1275 tons last year; to the Continent 11 tons; and to America, 782 tons.

**THE COPPER TRADE.**—Messrs. Vivian, Younger, and Bond (Sept. 6) write—Business, on the whole, has been quiet, but prices are well upheld. The transactions during the week have been limited to about 250 tons Chili bars, at 73s. to 74s. 5s., Liverpool spot, partly out of second hands; 25 tons of Urmeneta ingots, in Liverpool, at 79s. cash, and 200 tons regulus, at Swansea, at 15s. per unit. A second-hand cargo of ores has been sold at 14s. 9d. per unit. Considerable interest is felt as to what may be the quantity of fine copper advised by the next mail or two from Chili. It is expected that the approaching advices will show a very short list of charters. If this prove to be the case, and it should be followed up by still smaller supplies by the succeeding mail, we may expect a further improvement in prices. In the meantime, holders of Chili produce are frn, although it must be confessed that buyers do not show any eagerness in purchasing at present. There has been little passing in English or in fine foreign, prices of which remain about the same. From our usual monthly statistics, it will be noticed that stocks of fine copper have increased. This, however, is principally due to large arrivals of Chili produce in Liverpool during the past month.

**ROYAL CORNWALL POLYTECHNIC SOCIETY.**—Some awards have been made by the judges since the Prize List published in last week's Journal. During the Boring Machine has been awarded a first silver medal; the Fire Engine, a first bronze medal; Wash's Propagating Stove for greenhouse purposes, a first bronze medal; Cameron's Steam Pump, a second silver medal to Messrs. Tangey Brothers; Washing and Wringing Machine, exhibited by Mr. Slade Oliver, honourable mention; a working model of a Direct Acting Cornish Steam Engine, 10s.; a patent Universal Water Pump, second bronze medal; Improved Sextant, Mr. Cox, of Devonport, honourable mention; patent American Dovetailing Machine, highly commended; Hagon's Gas Engine, second silver medal; Woodford's Self-Emptying Skip, second bronze medal; Catalogue of Roman Coins found at Penance Farm, second silver medal, to Mr. T. Hodgkin.

An Amber Mine has been discovered about eight miles from Roke-wood, near Mount Misery, Victoria.

## The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, SEPTEMBER 6, 1867.

COPPER.			IRON.			Per ton.
Best selected..p. ton	£ s. d.	£ s. d.	Bars Welsh, in London	6	10	0
Tough cake and tile	80	0 0 85 0 0	Ditto, to arrive	6	10	0
Sheeting & sheets.	81	0 0 83 0 0	Nail rods .....	7	0	7 10 0
Bolts .....	83	0 0	Do, Staffd. in London	7	10	0 8 10 0
Bottoms .....	85	0 0	Bars ditto	7	10	0 9 10 0
Old (Exchange) .....	72	0 0	Hoops ditto	8	10	0 9 12 0
Burra Burra .....	85	0 0 86 0 0	Sheets, single .....	9	5	0 10 0 0
Wire.....per lb.	0 1 0	0 1 0 1 0 1 0	Pig No. 1, in Wales ..	3	15	0 4 5 0 0
Tubes .....	0 0 11 1 0		Refined metal, ditto.	4	0	5 0 0 0
BRASS.	Per lb.		Bars, common, ditto.	5	15	0 6 0 0 0
Sheets .....	9d.-10d.		Do, much. Tyneor Tees	6	10	0 0 0 0
Wire .....	8 1/2d.-9 1/2d.		Do., railway, in Wales	5	10	0 6 0 0 0
Tubes .....	10 1/2d.-11d.		Do., Swed. in London.	10	5	0 10 10 0
Yellow Metal Sheath.p. lb.	7 1/2d.		To arrive .....	10	5	0 0 0 0
Sheets .....	7d.		Pig No. 1, in Clyde ..	2	15	0 3 2 0 0
SPELTER.	Per ton.		Do. f.o.b. Tyne or Tees	2	6	0 0 0 0 0
Foreign on the spot.	£21 0 0		Do. Nos. 3, 4, f.o.b. do.	2	6	0 2 6 0 0
" to arrive ..	£21 0 0		Railway chairs .....	5	10	0 15 0 0
ZINC.	£27 0 0		Do, spikes .....	11	0	0 12 0 0
In sheets .....	£27 0 0		Indian Charcoal Pigs,			
TIN.			in London p. ton.	7	0	0 7 10 0 0
English blocks .....	93 0 0		STEEL.	Per ton.		
Do., bars (in barrels) ..	94 0 0		Swed., in kegs(rolled) ..	14	5	0 0 0 0
Do., refined .....	96 0 0		Do, (hammered) .....	15	0	0 0 0 0
Banca .....	94 0 0		Ditto, in faggots .....	16	0	0 0 0 0
Straits .....	£89 0 0		English, spring .....	17	0	0 23 0 0
TIN-PLATES.*	Per box.		QUICKSILVER (p. bottle)	6	17	0 0 0 0
IX Charcoal, 1st qua.	1 7 6	1 9 6	LEAD.	Per ton.		
IX Ditto, 1st quality	1 13 6	1 15 6	English Pig, com.	19	15	0 0 0 0
IX Ditto, 2d quality ..	1 5 6	1 7 6	Ditto, L.B. ....	20	0	0 0 0 0
IX Ditto, 3d quality ..	1 11 6	1 13 6	Ditto, W.B. ....	21	15	0 0 0 0
IX Coke .....	1 3 6	1 4 6	Ditto, ordinary soft ..	20	0	0 0 0 0
IX Ditto .....	1 9 6	1 10 6	Ditto, sheet .....	20	10	0 20 15 0
Canada plates, p. ton	13 10 0		Ditto, red lead .....	20	15	0 21 5 0
Ditto, at works .....	12 10 0		Ditto, white .....	27	0	0 30 0 0

\* At the works, 1s. to 1s. 6d. per box less.

† A Derbyshire quotation: not generally known in the London market.

**REMARKS.**—The want of activity and vigour in the Metal Market has been of such long continuance, that it must not be expected that a return to energy will take place at once, or that business will entirely recover from its depression without some relapses; we must not, therefore, be disappointed to find that the improvement previously noticed in our last reports makes but slow progress, and is not yet quite so firmly established as it is desirable it should be; still, we do not anticipate any retrograde movement, and feel assured that by slow and gradual steps we are going forward towards a condition of the metal trade which all are desirous of seeing established. We certainly want a little more life manifested in the trade, and a little more confidence shown in the permanency of the improvement. It would be, also, very desirable could we see a little more speculative feeling manifested, as this would give an impetus to the trade, which it very much requires; and we think that the present is just the time when such speculations could be entered into with every prospect of eventual success. Several metals, which generally have the preference in speculative movements, are just now upon the rise, and there seems little doubt that when they once go steadily forward it will be some time (possibly many years) before we shall again see them at the prices they have lately shown; and with the facilities now presented by the Money Market for obtaining advances upon easy terms, these sort of transactions offer great inducements for operations, and we trust are long to see them engaged in pretty considerably.

**COPPER.**—The market during the week has remained steady, at the improvement previously noticed, and although the amount of business has not been very extensive, prices have not at all given way. Tough cake is still quoted at 81s., Burra at 85s., Wallaroo at 84s., and Chili bars at 73s. 10s.

**IRON.**—In Staffordshire there is a decidedly hopeful feeling in the trade, and those who have orders to give out find in some cases hesitation about taking them for immediate delivery, and a disposition to press for some advance on the low rates to which competition has for some time reduced the second-class makers. The quarter has gone, so far, without a relapse from the improvement with which it opened, and a more general feeling of confidence has been created than has existed since the beginning of the dull season. In Welsh the shipments of iron keep up tolerably well, and the somewhat improved feeling in the trade is so far maintained, and there is every prospect of its continuance. The contracts undertaken by the Blaiva Company, and which were not completed when the works stopped, have, it appears, been taken by the Ebbw Vale Company, whose establishment is in close proximity to the former. The pig-iron of the district, more especially the cold-blast makes, finds a tolerably ready sale, at prices that leave some margin, and this may be said to be the only branch of the iron trade which yields anything like satisfactory results. The home railway companies have not yet commenced buying rails to any considerable extent. In Swedish iron the demand still continues good. In Scotch pig-iron the market has continued active during the week, and a large business has been done, the price having advanced at one time to 54s. 6d. cash. At the last advice from Glasgow, however, a slight decline had occurred to 54s. 4 1/2d. cash.

**LEAD.**—The market continues steady at the quotations. Spanish pig is, if anything, rather firmer.

**TIN.**—English continues steady at the official rates. The market for Straits, at one time, was not quite so firm, and the price gave way to 88s. 10s. cash, but has since become again firmer, and considerable business has been done at 89s. cash, and 90s. for arrival. In Holland the stock of Banca on warrants, on August 31, was 126,606 slabs, against 97,850 slabs same time last year, and the arrivals towards next sale were 64,416 slabs, against 168,507 slabs same time last year. The market is firm at 55s. The Dutch Trading Company have announced that their half-yearly sale of Banca will take place at Rotterdam on the 26th instant, and will consist of 65,000 slabs of Banca, with 6000 slabs in addition, if arriving in time, and 400 slabs of Billiton. The stock of tin in warehouse in London on August 31 was 2995 tons, against 2762 tons same time last year, and the quantity of Straits afloat for Europe is 1592 tons, against 1275 tons same time last year.

**SPELTER.**—Very little business has been done in this metal during the week. The quotation on the spot is now 21s., under which holders are not disposed to sell. The stock in London on August 31 was 3763 tons, being an increase of 136 tons during the month.

**TIN-PLATES.**—A good deal of animation is now evinced in the trade, and both charcoal and coke are in good demand.

**STEEL.**—Sales of foreign steel continue. There is no stock here.

**QUICKSILVER.**—Demand only limited.

**LIVERPOOL, SEPT. 5.**—Messrs. Knowles, Gorst, and Riso write—Copper: The past week has been one of unusual quietude.—Chili Bars: We have not heard of any transactions; holders are firm, at 73s. 10s. to 74s. A cargo of regulus sold yesterday at 14s. 9d., and to-day 15s. has been paid.—Tin, after the large transactions of last week, has been quiet. About 400 tons of Straits have arrived in London, and prices have rather given way. We now quote Straits 89s., Banca 92s.—Tin-plates are in good demand, at full prices.

**BIRMINGHAM, SEPT. 6.**—Bylands' "Iron Trade Circular" says—Iron market improving, pigs steady, manufactured iron 2s. 6d. better towards list prices.

**MIDDLESBOROUGH, SEPT. 5.**—The "Iron Trade Review" states:—The finished Iron Trade of the North of England continues to improve gradually, more particularly in rails. Plates are still depressed; some mills are not working. Pig-iron is steady; shipments are tolerably brisk, especially to Scotland. Prices remain unaltered. Stocks are about stationary.

**COAL MARKET.**—The fresh arrivals this week number 92 ships. For house coals there has been a slightly increased demand, and prices quote an advance of 3d. per ton. Hartley coals have remained steady, fully supporting the late prices. Hetton Wallsend, 20s. 3d. per ton; East Hartlepool Wallsend, 19s. 6d.; Hartlepool Wallsend, 19s.; Eden Main, 18s.; Hetton Lyon's Wallsend, 17s. 6d.; Tunstall Wallsend,

17s. 6d.; Kelloe Wallsend, 18s. 6d.; Hartley's Hartley, 18s. 6d. per ton. Unsold, 3 ships; at sea, 35 ships.

The MINING SHARE MARKET has been active for this season of the year (which is usually dull), and the continued rise in the standard for copper—equal now to about 9s. per ton of ore—has caused a good many enquiries for dividend copper mines, such as Devon Great Consols, South Caradon, West Seton, Wheel Seton, Prince of Wales, Marke Valley, and a few other mines. Business has also been doing in Great Retallack, North Retallack, North Treskerby, South Condurrow, Tincroft, West Chiverton, Wheel Chiverton, Wheel Mary Ann, Great Wheel Vor, Herodsfoot, New Seton, East Caradon, Clifford Amalgamated, Chontales, and a few others. South Frances, 30 to 32 1/2; at the meeting, held on Monday, the accounts showed a profit of 561s. 11s. 3d. on the two months' working, and a dividend of 1s. per share (496s.) was declared, leaving 402s. 10s. 4d. in hand. In the 74 fathom level, east of Pascoe's, the lode is worth 25s. per fathom; and in the tribute department there is no change since last report. Bedford United, 22s. 6d. to 27s. 6d.; Chiverton, 5s. to 5 1/2. Prince of Wales shares advanced to 52s. 6d., and leave off 50s. to 52s.; no change has taken place at the mine, which, it is hoped, will soon be clear or stuff. In the cross-cut towards the north lode the water is daily increasing. The ore last sold weighed off 133 tons; and the sampling on Thursday, notwithstanding the want of water, is 85 tons. Great Retallack shares have been flat, at 4 1/2 to 4 3/4; the No. 1 shaft is down to the 20, and in about ten days this lode, it is expected, may be out. Redmoor, 6s. to 7s.; some branches, one of which is yielding good stones of silver ore and black copper ore, have been met with, but the lode not yet cut. Clifford Amalgamated, 7 1/2 to 8 1/2; East Bas-set, 19 to 20; East Carn Brea, 2 1/2 to 2 3/4; East Lovell, 7 to 7 1/2; East Russell, 25s. to 30s.; East Wheel Grenville, 1 1/2 to 2; Frontino and Bolivia, 10s. to 12s. 6d.; Great Laxey, 18 to 18 1/2; Great Vor, 17 1/2 to 18 1/2.

Tincroft, 13 to 14; at the meeting, held on Aug. 29, the accounts, crediting tin sold, 4328s. 12s. 6d., and 26 tons unsold, 1413s. 15s., and charging up the cost only to March last, were made to show a profit of 1502s. 5s. in three months' working, and a dividend of 5s. per share (1500s.) was declared, leaving a balance to be carried to credit of next account of 146s. 19s. 9d. At the foot of these accounts there is the somewhat novel statement of an auditor, dated Aug. 28— "The foregoing accounts are correct; all the accounts charged to the end of December, 1866, have been paid, and duly vouched." Are the shareholders to understand from this that the accounts charged in the present account (only up to March), and which the auditor says are "correct," have not been paid? No dates are given to the tin sales, and, with the novel proceeding of paying a dividend out of "tin unsold," there would be at the day of the meeting in August the costs of April, May, June, and July (not much less than 5000s.) due to someone, and a liability on the shareholders. It is possible there may be a vast amount of "unsold" tin on the mine to go against this, beyond that credited; and, if so, the shareholders should at least be told of it. In regard to the state of the underground workings, the purser reports that on Chapple's lode, in the 222, driving east of boundary winze, the lode is worth 150s. per fm., and speaks well for the durability of the mine, this being the bottom level. Great North Downs, 4 1/2 to 4 3/4; Sleggan's shaft is worth 30s. per fm.; the lode in the 86 west is worth 20s. per fm. Marke Valley, 5 1/2 to 5 3/4; North Crofty, 4 to 4 1/2; North Retallack, 5 to 5 1/2; North Treskerby, 1 1/2 to 1 3/4; South Caradon, 37s. to 39s.; South Condurrow, 10s. to 15s.

At Hington Down Down Consols meeting, held on Aug. 29, the accounts showed a cash balance in hand of 1248s. 8s. 1d., and an estimated amount of payments and receipts before the meeting, to be held in Dec., of 830s. 19s. 6d. The cost for this time is estimated at 650s. per month, and the next sale of ore will be 320 tons. Devon Great Consols, 41s. to 42s.; West Chiverton, 6s. to 6 1/2; Wheel Buller, 22 1/2 to 25; Wheel Chiverton, 6 1/2 to 7; Wheel Mary Ann, 14 1/2 to 15 1/2; Wheel Seton, 110 to 115. Mining Association, 15s. to 16s.; this company has been registered in 25,000 shares of 2s., and a large portion of the shares allotted to 175 of the Mineral Rights shareholders, who get credit for 1s. per share paid-up, the directors receiving from the liquidators the *pro rata* proportion of the funds of the company. Chontales shares have been in good demand, and leave off 5 1/2 to 5 3/4; we understand that Mr. Truran has returned from the mines, and although nothing official is known, it is understood his report is most satisfactory. Mr. Truran, before he left Chontales, broke samples of stuff with his own hands from the different points in Consuelo and other mines of the company, and these are to be assayed and the result communicated to the shareholders, after the meeting of directors on Tuesday next. As Mr. Truran's report has been for some months anxiously looked for, and as that gentleman has now been in England for more than a week, it seems a pity the directors could not have met before Tuesday, if it were thought necessary for them to do so, before any communication was made to the shareholders.

The market for Mine Shares on the Stock Exchange has been moderately active during the week. West Chiverton shares were more offered at one time, but subsequently rallied, and close firm. The lode in the 110, or bottom level west, is worth 100s. per fathom—a splendid course of ore, and other parts are reported as being rich and improving. The mine in a great success. At Westminster Mine, the lode in Thompson's shaft is worth 4 tons per fathom, and the 70 east 2 tons; the mine is opening up well. Marke Valley shares are firm, and in demand. Some of the heavy copper shares are less firm. Great Wheel Vor in demand, at 18s. to 19s.; and Tin shares are better. Brazilian shares are in favour, and gold mine shares generally have been largely dealt in. The quotations appear in the Share List.

**IRISH MINE SHARE MARKET.**—We are now under the influence of the annual long vacation season, heightened by the attractions of genial weather, and an abundant supply of game for the sportsman, so that we need not dive deeply into French, or any other foreign financial or political positions, to find ample reasons for the state of inactivity which has set in on our Stock Exchange, in spite of the plethora of money lying comparatively idle at the banks. The present stagnation in speculation carries with it the assurance that this superabundance of money in England and here is not likely to be diverted from home by any speedy introduction of important foreign loans, the recent signal failure to introduce a Russian loan of 12 millions sterling on the London Stock Exchange no doubt exercising a salutary check on foreign Governments trying to borrow in Great Britain on their often very questionable securities. Our capitalists keeping their money safe for the close of their financial year, and reinvigorating their, of late much shaken, nerves on the sea shores, in the mountains and glens, and in the sporting field, will, we are sure, return to business in due course, and recommence their operations, though with caution, with full energy, and thus give fresh impetus to many genuine undertakings, which are now left slumbering, or to ripen more perfectly, for the return of the season of renewed activity and enterprise. Meanwhile the directors and shareholders of such companies as require new life as an amelioration of their old course should make good use of the interval to digest suggestions of some radical means to improve their respective positions. Thus we hope, for instance, that those of the General Mining Company for Ireland will determine to avail themselves of the new facilities afforded to them by the recently-passed Act of Parliament for limited joint-stock companies, in order to procure the reduction of their shareholders' nominal liability.

The hint which we gave to this effect last week has brought forward several letters to our Dublin daily contemporaries, all clamouring for this relief, which we have been the first to suggest, although "An Englishman," whose letter on this subject appears in the *Irish Times* of Wednesday last, has not the candour, for which his nation claims credit, to acknowledge that his is merely a reproduction of what he read the week previous in our Journal. That the value of the mines in question is sincerely believed in by the shareholders, as well as the directors is abundantly proved by their long-trying patience, and the preparations for the realisation of their fair prospects must, after so many years of diligent labour, be sufficiently far progressed to enable the directors, with their officials at the mines, to come to a close estimate of the expenditure yet required. It appears quite impossible that anything like even a moiety of 25s. per share,

which is the amount of the shareholders' present liability, can ever be required. Let the company, therefore, ascertain and call up what more they may require, and take the necessary steps to close, or reduce, their liability per share, and they will, no doubt, soon after occupy as respectable a position in the stock and share price lists as any of their progressive neighbours, instead of seeing their property often pressed for sale at 50 per cent. discount, which is not only an undesired stigma on their own, but also on Irish mining property generally. For the reasons above referred to, business has been very slack on the Dublin Exchange this week, but Wicklow Copper Mining Company shares remained steady at our last quotation of 20l. 10s. (fully, or 2l. 10s. paid). Mining Company of Ireland shares, which last week closed at 18l. 5s. to 18l. 7s. 6d., actually touched on Monday last 18l. 12s. 6d. to 18l. 15s., but changed hands on Tuesday at 18l. 10s. (7l. paid), being still an advance for the week of from 2s. 6d. to 5s. per share. Connore shares are heavy, at a further slight reduction of 3d. per share, or to 10s. 3d.

At Camborne Tackling, on Thursday, 2434 tons of ore were sold, realising 13,876l. 8s. The particulars of the sale were:—Average standard, 106l. 9s. 0d.; average produce, 8; average price per ton, 6l. 2s. 0d.; quantity of fine copper, 193 tons 5 cwt. The following are the particulars of the sales during the past month:—

Date	Tons	Standard	Produce	Per ton	Per unit	Ore copper
Aug. 31	3189	105 14 0	6 1/2	4 1 0	12s. 7d.	63 0 0
" 30	1391	109 12 0	6	3 17 0	12 9	63 15 0
" 29	3329	112 3 0	6 1/2	4 9 6	13 11	69 10 0
" 28	1686	105 7 0	8	5 13 6	14 2 1/2	71 2 0
Sept. 5	2434	106 9 0	8	6 2 0	14 4	71 15 6

Compared with last week's sale, the advance has been in the standard 15s., and in the price per ton of ore about 1s. 2d. Compared with the corresponding sale of last month, the advance has been in the standard 7l. 10s., and in the price per ton of ore about 12s.

At South Wheel Frances meeting, on Monday, the accounts showed a profit on the two months' working of 561l. A dividend of 496l. (1l. per share) was declared.

At the Sumner Hill Mine meeting, held at Liverpool, on Tuesday, the committee of management declared a dividend of 5s. per share.

At Great Laxey half-yearly general meeting, on Wednesday next, the accounts to be then presented will show a credit balance on the six months' working of 9457l. 18s. 7d. The ore sold during the six months realised the sum of 11,894l. 5s. 7d., and the stock of ore on hand is valued at 6714l. 6s. The labour cost amounts to 13,302l. 11s. 10d.; merchants' bills, 3310l. 17s. 2d.; office expenses, &c., 410l. 17s. 3d.; royalty, 1861l. 17s. 1d. The credit balance on the new capital account amounts to 13,265l. 4s. 7d., which, with the credit balance on the six months' working, leaves a balance of assets over liabilities of 21,733l. 3s. 2d.

At Gwydyr Park Consols Mine meeting, on Thursday (Mr. W. S. Sutton in the chair), the accounts showed a debit balance of 4l. 11s. 6d. A call of 6d. per share was made.

At the North Downs Mine meeting, on Tuesday (Mr. H. Milford in the chair), the accounts showed a debit balance of 1800l.; and a dividend of 1600l. had been written off on account of forfeited shares. A call of 7s. 6d. per share was made. The report was satisfactory.

At the Cuddra Mine meeting, on Thursday (Mr. W. S. Sutton in the chair), the accounts showed a debit balance of 1921l. 0s. 8d. A call of 5s. per share was made.

At Wheel Mary Hutchings (Plympton) quarterly meeting, held at the mine, on Aug. 28 (Mr. John Arnold in the chair), the principal shareholders, representing 900 shares out of the 1000 into which the mine is divided, being present. The proceedings were of the most satisfactory character. The report of Captain Edwards, the manager, was read, and highly approved of, and the statement of accounts showed, after paying for a drawing-engine, and all its appliances, and every debt connected with the mine being paid up to July 31, a credit balance of 1900l. 1s. 10d. It was unanimously agreed to advance the manager's salary to 8l. 8s. per month. The sampling will take place during the next week, the produce of August month, which will realise to the shareholders a good profit.

At the Gawton Copper Mine meeting, on Wednesday (Mr. J. Chertton in the chair), the accounts showed a credit balance of 1632l. 16s.

At the British Slate Company meeting, on Monday (Mr. John Robinson in the chair), the report of the directors was received and adopted unanimously. No dividend was declared, as it was determined to carry the balance of profit to the liquidation of the remaining liabilities on account of the purchase of the property. The shareholders present subscribed the funds necessary for clearing off the whole of the liabilities of the company. The details of the meeting will appear in next week's Journal.

Mr. William Grain, of Threadneedle-street, has been appointed a Commissioner of Deeds and Affidavits for the States of New York, Pennsylvania, Ohio, Massachusetts, Maine, Missouri, California, and South Carolina.

On the Stock Exchange a large amount of business has been transacted in Mining Shares during the week. The following quotations were officially recorded in British Mining Shares:—East Basset, 19; East Caradon, 5l. 5s.; Wheel Buller, 26; East Carn Brea, 23; Herodfoot, 35l.; West Chiverton, 65, 64; Great Wheel Vor, 18l. 18s.; Marke Valley, 5l.; Prince of Wales, 2 9-16th; Providence, 30l.; 18 Colonial and Foreign Mining Shares the prices were:—Scottish Australian, 1 1-16th; Cape Copper, 7l.; Worthing, 4 1-4; Anglo-Brazilian, 1 1-4; Chontales Gold, 5l. 5s.; 5 3-16th; Don Pedro, 1 1-2; 1 15-16, 2 1-2, 1 1-2, prem. ex div.; Fortuna, 1 1-2; St. John del Rey, 60l., 60l. 60l.; United Mexican, 2l.; Port Phillip, 1 3-16th, 1 1-2, 15-16th; Pestarens, 2 1-2, 2 1-2.

## ROCK-DRILLING MACHINE.

GENERAL HAUPT'S ROCK-DRILLING MACHINE will be WORKED ON WEDNESDAY and each day following of next week, at Twelve o'clock each day, at 57, WELLS STREET, OXFORD STREET, at this City.

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MAC ADAM BROTHERS AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, after twenty years of experience, have brought their IMPROVED TURBINE to great perfection.

It is applicable to all practicable heights of fall, giving much greater power from the water than any other kind of water-wheel.

On low falls it has the great advantage of not being impeded by floods or backwater.

It is particularly well adapted for situations where the quantity of water is variable, and where all other wheels fail.

Its motion is extremely regular, and, when desired, a governor can be applied effectively.

This wheel is at work in a great many places, to which reference will be given.

ELFORD, WILLIAMS, AND CO., COPPER ORE WHARFERS, SHIP BROKERS AND COAL EXPORTERS, METAL AND GENERAL COMMISSION AGENTS, SWANSEA.

ELFORD, WILLIAMS, and Co. having erected an assay office, and engaged the services of a practical Cornish assayer, who will devote his whole time to this branch of their business, they are now in a position to make correct assays of copper, and other mineral ores, on the most moderate terms.

JOHN HOCKING AND SON, ENGINEERS, REDRUTH, CALL THE ATTENTION OF COLLIERY PROPRIETORS and others to the present favourable opportunities for the purchase of secondhand CORNISH PUMPING ENGINES and BOILERS at cheap rates. Plans, valuations, &c., of every description of mining machinery undertaken.

FOR SALE, ONE superior 30 in. DOUBLE ROTARY ENGINE.

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MINING PROPERTIES INSPECTED AND REPORTED ON.

MR. LEDWARD, CHESTER, has FOR SALE a few SHARES in the TRELLOGAN and GLEN ALUN LEAD MINES, at a small price. An opportunity of acquiring shares in such valuable properties sell at once, except at very high premiums; the returns of ore (which have for some time covered the cost) are increasing every month; and the mines are re-erecting, to pay permanent dividends.

WANTED, TO PURCHASE, SHARES in the following MINES:—BRYN GWIG, WESTMINSTER.

MANCHESTER, and WEST END OF LONDON

MR. W. HANNA M. MINING, SLATE QUARRYING, INSURANCE, and GENERAL SHAREBROKER, ANTEANEOUS COMMUNICATION with the STOCK and MINING EXCHANGES, avoiding the delay and annoyance of visiting the City to ascertain prices. A Monthly Investment Circular on application.

## STAMPS AT ONE PENNY FOR DRAFTS, RECEIPTS,

DELIVERY ORDERS, &c., &c. The COMMISSIONERS OF INLAND REVENUE hereby give notice, that a NEW ADHESIVE STAMP to denote the DUTY OF ONE PENNY, payable on a Receipt, Draft, &c., has been PREPARED of a size smaller than that hitherto issued to the public. It will, nevertheless, still be competent to any person to use a stamp of the larger size for the above purpose.

By order of the Board, T. SARGENT, Secretary, Inland Revenue, Somerset House, 3d September, 1867.

## EUDON LEAD MINING COMPANY (LIMITED).

WANTED, by the above company, a WATER WHEEL, 40 ft. diameter, of thereabouts, the wheel not less than 2 ft. 6 in., and not more than 3 ft. 3 in. wide, and one set of PUMPS, 30 fms. in length, from 10 to 14 in. diameter. Applications to be made at the company's office, Consett, via Gateshead.

JOHN HUDSON, Manager, ANTHONY STETTING, Secretary, 218, Front-street, Consett, August 29, 1867.

## TO CORNISH MINERS.—WANTED, a PRACTICAL MINER,

to PROCEED at SWEDEN at once. One having a knowledge of pyrites preferred. State all particulars as to wages required, &c.—Address, Subscription Room, Commercial Sale Rooms, Mining-lane, London.

## WANTED, an EXPERIENCED BOOKKEEPER, thoroughly

acquainted with mining accounts, to TAKE CHARGE of the BOOKS of a respectable FOREIGN MINING COMPANY, having its head-quarters in this country. Salary £100. Applications, with full particulars as to experience, and giving references, to be addressed, in the handwriting of the applicant, to "No. 136," Mining Journal office, 26, Fleet-street, London.

## WANTED, a SITUATION as SURVEYOR or ASSISTANT

MANAGER at a COLLIERY. Good references.—Apply to "X. Z." Mining Journal office, 26, Fleet-street, London, E.C.

## WANTED, TO PURCHASE, a CONDENSING ENGINE,

16 to 20 in. cylinder, 4 ft. 6 in. to 5 ft. stroke. Particulars and price, by letter, to Box 12, Post Office, Swansea.

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EXPERIENCE in the MANAGEMENT of MINES in CORNWALL, is OPEN to an ENGAGEMENT ABROAD as GENERAL MANAGER or SUPERINTENDENT of MINES. Unexceptionable references. Address, "F. G. S.," Post Office, Truro.—August 20, 1867.

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and the general management and development of Mineral Properties, &c., DESIRES the POST of a MINING RESIDENT AND MANAGING AGENT. Would collect the rents and keep the general accounts of an extensive estate, and otherwise render his practical experience advantageous to a landed proprietor requiring confidential, trustworthy aid in the management and development of his property. The highest certificates and references of ability and energy, moral integrity, &c., &c. Address, "Fides," Mining Journal Office, 26, Fleet-street, London, E.C.

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GENTLEMAN, having the command of £1000, to ASSIST him in the DEVELOPMENT of the PRODUCT of a MINING ESTATE having a peculiar property likely to be in great demand both at home and abroad. The proprietor has expended a considerable sum of money to obtain the article to a large extent, and it only now requires to be made merchantable, and capital found, to carry on an extensive trade. A pretty residence can be had near the property, overlooking the Welsh coast, and domestic expenses are very moderate.

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IN the MATTER of the COMPANIES ACT, 1862, and of the CEFN CILCEN MINING COMPANY (LIMITED).—The CREDITORS of the ABOVE-NAMED COMPANY are REQUIRED on or before the 20th day of September, 1867, to SEND their NAMES and ADDRESSES, and the particulars of their DEBTS or CLAIMS, and the NAMES and ADDRESSES of their solicitors, if any, to George Whiffin, of No. 8, The Old Jewry, in the City of London, the official liquidator of the said company, and if so required by notice in writing are by their solicitors to COME IN and PROVE THEIR SAID DEBTS or CLAIMS at the chambers of the Vice-Chancellor Sir John Stuart, No. 12, Old Square, Lincoln's Inn, in the county of Middlesex, at such time as shall be specified in such notice, or in default thereof they will be excluded from the benefit of any distribution made before such debts are proved.

Wednesday, the 6th day of November, 1867, at Twelve o'clock at noon, at the said chambers, is appointed for hearing and adjudicating upon the debts and claims.

ALFRED HALL, Chief Clerk.

ANTHONY PULBROOK, 28, Threadneedle-street, in the City of London, Solicitor for the Official Liquidator.

Dated this 9th day of August, 1867.

## HOLMBUSH MINING COMPANY.—Any PERSONS having

CLAIMS against the above-mentioned mining company (the affairs of which are now being wound-up, pursuant to a resolution passed at a general meeting of the shareholders, held on Tuesday, the 22nd day of May, 1866), are requested to SEND PARTICULARS of their CLAIMS to Mr. WILLIAM WARD, at No. 25, Bishopgate-street Within, in the City of London, on or before the 30th day of September.

WILLIAM WARD, Secretary.

Dated this 31st day of August, 1867.

## EXTRAORDINARY PROFITS.—A small company, with limited

liability, is being formed to purchase and work a valuable ironstone property, convenient to the Staffordshire furnaces; a contract can be made with a practical engineer to raise from the property, and dispose of a sufficient quantity of the ironstone to produce a yearly profit of from 4000l. to 5000l., which will give a clear profit of 150 per cent. per annum on the whole capital of the company. This, it is said, is no mere guess work, as the deposits of iron have been proved, and the contract to work can be commenced at once, thus affording those investors desirous of augmenting their incomes by the outlay of a small amount of capital an opportunity seldom heard of.

The investment is considered to be deserving the attention of those who have money to invest, with the view of securing early and large profits.

## LEAD ORES.

Date	Mines	Tons	Amount	Purchasers
Sept. 5	Dyllife	102	£12 9 6	Walker, Parker, & Co.
"	ditto	33	12 8 6	ditto
"	ditto	32	12 8 6	A. Eytton
"	ditto	37	12 9 0	ditto
"	Stilperstones	30	12 5 6	Glover and Co.
"	ditto	30	12 5 6	Walker, Parker, & Co.

## BLENDE.

Date	Mines	Tons	Price per ton	Purchasers
Aug. 31	Great Laxey	300	£3 5 0	Vivian and Sons.

## COPPER AND COPPER ORES

Sold at LIVERPOOL, from Aug. 17 to Aug. 28.

Messrs. Pitcairn-Campbell and Co. (August 30) write:—The Chili

Mail of July 16 only advises charters for 1350 tons, with very few sales during the fortnight. The letters bring details of the shipments during the first six months of 1867, which compare, as follows, with the corresponding periods of previous years:—

Years	Bars	Regulus	Ores	Total of Peru Copper
1867	1,185,349	1,185,349	1,185,349	1,185,349
1866	205,081	205,081	205,081	205,081
1865	277,591	277,591	277,591	277,591
1864	212,053	212,053	212,053	212,053

Sales since our last have been:—

Mine or ship	Tons	Price	Mine or ship	Tons	Price
Ore—Sundry ships	950	£ 0 14 3	Ore—Sundry ships	950	£ 0 14 3
Bars—Golconda	45	70 10 0	Bars—Golconda	45	70 10 0
Bars—Zadkiel	22	70 0 0	Bars—Zadkiel	22	70 0 0
Reg.—Golconda	80	0 14 6	Reg.—Golconda	80	0 14 6
Bars—Golconda	45	70 10 0	Bars—Golconda	45	70 10 0
Bars—Atahualpa	60	69 10 0	Bars—Atahualpa	60	69 10 0
Bars—Atahualpa	50	70 0 0	Bars—Atahualpa	50	70 0 0
Ing.—Corredora	25	78 0 0	Ing.—Corredora	25	78 0 0
Bars—Atahualpa	100	70 0 0	Bars—Atahualpa	100	70 0 0
Bars—Pudsey Dawson	100	71 0 0	Bars—Pudsey Dawson	100	71 0 0
Ing.—Corredora	50	78 0 0	Ing.—Corredora	50	78 0 0
Ing.—Corredora	25	78 0 0	Ing.—Corredora	25	78 0 0
Bars—Corredora	134	71 0 0	Bars—Corredora	134	71 0 0
Bars—Atahualpa	50	71 0 0	Bars—Atahualpa	50	71 0 0

## WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,  
MINING AGENTS, STOCK AND SHARE DEALERS, &c.  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON BROTHERS beg to notify to their friends and the public generally that Mr. W. H. CUELL has retired from the firm, in accordance with a clause in the deed of partnership; and having also sold to the remaining partners all his right, property, and interest in the business hitherto carried on by J. Y. WATSON, F.G.S., NAPOLEON FREDERICK WATSON, and himself, under the name of "WATSON and CUELL," the same will be carried on in future by Mr. J. Y. WATSON and Mr. N. P. WATSON, under the designation of "WATSON BROTHERS," and they take this opportunity to return their most sincere thanks for the great patronage bestowed and confidence reposed in the firm for 24 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and state of the share market, will in future appear in this column. In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

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Compiled by ROBERT HUNT, F.R.S.,  
Keeper of Mining Records, and printed by order of the Lords Commissioners of H.M. Treasury.

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His Royal Highness the Prince of Wales has granted two Scholarships, and several others have also been established by Government.

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This company has been formed for the purpose of working the eastern portion of the Westminster mining sett, situate in the parish of Halkyn, in the county of Flint.

The present operations are being conducted on the main lode, the same as that on which the Westminster Mine has been so successful, and the agent, in writing of it, says:—"We have been drawing stuff to surface to-day; it looks well, several stones of lead ore weighing nearly ½ cwt. each."

A neighbouring mine has unwisely tried this property, the outlay on machinery will, therefore, of necessity be small, a drawing-engine being all that will be required.

The majority of the shares (over 5000) are being taken up by the shareholders in the Westminster Mine; the remainder are offered to the public.

Further particulars, and forms of application, can be had on application to Mr. THOMAS THOMPSON, 12, Old Jewry Chambers, E.C.

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IT IS PROPOSED TO FORM A LIMITED COMPANY for the purpose of WORKING the VALUABLE MINES of IRONSTONE, situated near the Kirkham and Castle Howard Stations on the York and Scarborough Railway, and at present held by several gentlemen of respectability and standing, under agreements for leases from E. C. Taylor, Esq., and the late Earl of Carlisle. The lessees are desirous of properly working the mines, and constructing blast-furnaces for the manufacture of pig-iron.

The company will be incorporated under the Limited Liability Act, with a total capital of £50,000, in 3000 shares of £20 each, which will be called up as follows:—One-fourth on the commencement of the works, one-fourth eight months afterwards, one-fourth in sixteen months, and the remainder as may be required. Of this sum £50,000 will be required for carrying out the works and putting them into operation. The remaining £10,000 is a reserve fund for the credit of the company, and to meet any trading contingencies. Other matters necessary to the proper carrying out of the project will be left to the decision of the subscribers at their first meeting.

The estimated value of the lessees' interest, which they merge in the undertaking, is £2000; of this sum £1000 is the value of work done on the property in proving the minerals, and £1000 has been paid for royalty rents, which last-mentioned sum is redeemable by short workings. No promotion-money will be demanded.

The royalty rents are 5d. per ton of 22½ cwt. The seam of ironstone is 12 ft. in thickness, and the calcined ironstone has been found to produce upwards of 40 per cent. in the blast-furnace, and to make a very superior quality of iron. The ironstone can be mined and delivered to the kilns at a cost, including royalty and all charges, not exceeding 2s. 9d. per ton, and the limestone, which is found on the property, at 1s. per ton. There is a favourable site for blast-furnaces. No shafts or machinery will be required for the mining of the ironstone, which will be delivered from the drifts direct into the works, and at a higher level.

The quantity of minerals may be said to be practically inexhaustible.

The estimate, which has been carefully made, of the cost of productions shows that iron can be manufactured at these works considerably under £2 per ton, which leaves a large margin of profit, even at the present low price of pig-iron. From statistics of the Cleveland pig-iron trade for the half-year ending 30th June, 1867, it appears that the make of the district was 83,175 tons in excess of the previous half; the demand carried off the whole of this extra production, with the exception of 8000 tons. This is a very satisfactory state of things, and shows the stability of the trade of the district. At the present time the rate of production is above 1,200,000 tons per annum.

The Kirkham and Castle Howard properties possess unusual facilities for the cheap manufacture of pig-iron, and will compare favourably with any other district in the kingdom.

It may also be stated that the slag can be disposed of in any quantity, there being a very large district of country commanded by the Derwent navigation, which adjoins the proposed works, at present almost entirely destitute of road material.

Arrangements have been made by the lessees for the works to be constructed under the personal superintendence of Mr. J. BECKTON, C.E., Whitby; and the mining conducted by Mr. J. ABBOTT, M.E., Whitby; and full information will be given and subscriptions received by Messrs. JACKSON, WILSON, and JACKSON, solicitors, Malton; or to Messrs. EMMETS, WATSON, and EMMET, solicitors, 34, Bloomsbury-square, London, W.C.

## TO THE NOBILITY, CLERGY, GENTRY, ARCHITECTS, AND BUILDERS OF THE UNITED KINGDOM.

## THE POLYPHANT QUARRIES, NEAR LAUNCESTON, CORNWALL.

These quarries are now opened and in full work on strata of great thickness and depth, and as extensions may be obtained into the adjoining lands, the works are practically inexhaustible. The stone is beautiful in appearance and excellent in quality; it has been used in the mullions, coigns, pillars, and carved work of some of the most ancient churches and buildings in the counties of Cornwall and Devon (see Llanwalek, Stoke Climsland, Altarnun, and Callington Churches, in Cornwall; the churches of West Alvington near Kingsbridge, and St. John's near Plymouth; also, Endsleigh Cottage, near Tavistock, the seat of the Duke of Bedford, and the new Savings' and East Cornwall Banks, Launceston), in the arches and coigns of Launceston Castle, and many other public edifices, in all of which its appearance and preservation attest its great beauty and durability.

The stone may be had of a neutral grey colour, or green with red spots, and is much admired by architects for its chromatic effect, whilst the facility with which it can be worked, and the hardness it acquires by exposure, render it equally economical and valuable.

It is geologically a massive greenstone, allied to serpentine, capable of manufacture into chimney pieces, fonts, and all articles of ornamental and useful stone-work. It is also especially adapted to ecclesiastical and civil architectural ornamentation.

These quarries are continuous with the old Pollyphant Quarries, which were worked between the 10th and 15th centuries, and from which immense quantities of stone were raised and sold down to a recent period, and the produce of this property needs only the advantage of transit (now in course of being provided) to obtain general use.

The railway to Launceston, now opened, affords an easy carriage of the stone to Plymouth, London, and other places, and the continuation of the intended line to the West, and a station to be erected within a mile of the estate, will complete the required facilities.

Subjoined are the names of a few architects and others, in London, who know the stone, and who, if required, can testify to its merits:—Henry Wakefield, Esq., 11, Adam-street, Adelphi, C.E.; G. Gilbert Scott, Esq., F.R.G.S., Spring-gardens; Richard Coad, Esq., of the same place; and Messrs. Field, Westminster, at whose offices, or at the Crystal Palace, specimens of the stone can be inspected.

## POLYPHANT STONE.

Granite Office, Plymouth.—We have the pleasure to enclose for your inspection a small specimen of the above-named beautiful article, which is raised from a quarry near Launceston, in Cornwall. The following particulars will make it interesting to the archaeologist and architect:—It was extensively used in the counties of Cornwall and Devon between the 10th and 15th centuries, there being few churches in Cornwall in which it has not been partially used, and many are entirely built of it. It is to be seen in Launceston Castle in good preservation. Its softness, when first raised, is so great that it can be cut with ease by a common hand-saw, and it is especially adapted for the elaborate ornaments of Gothic architecture; after exposure to the atmosphere it hardens considerably. To architects it cannot fail to recommend itself from its great cheapness in working; and the pleasing tone of its colour renders it peculiarly suitable for the internal lining of public edifices.

These gentlemen erected the monument, of Cornish granite, to the late Duke of Wellington, at Strathfieldsaye.

Application for stone may be made to HENRY WAKEFIELD, Esq., C.E., 11, Adam-street, Adelphi; or the proprietor of the quarries, JOHN SARGENT, Esq., the Parade, Liskeard, Cornwall.

**METALS AND MINES.**—A young ASSAY MASTER, having good credentials from the Royal School of Mines under Dr. PERCY, and as a chemist under Dr. HOFMANN, is OPEN for an ENGAGEMENT, at home or abroad. Speaks French.  
Address, "C. H. P.," 2, New Bond-street, London.

## Notices to Correspondents.

\* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

**TICKETING EXPENSES.**—Mr. Pryor still persists in the thorough abolition of all indirect fees and payment to samplers, &c. The Chairman (Capt. Richards) admits that his resolution would have been carried; and Dr. George Michell has also pledged himself, if not to support it, that he will not oppose it, believing it to be the only proper course to be adhered to.—S. R.

**SOUTH TREVENNA.**—As there has been no report in the Journal from the agent for some weeks, I shall be glad to know what is doing. I hope it is not to be like Wheal Trevenna, crippled in its youth.—A SHAREHOLDER.

**NEW CRIDDIS MINING COMPANY, AND ITS MANAGEMENT.**—As a shareholder in this company, and having a letter from a friend of mine in Cornwall (also one), whose truthfulness I can depend upon, drawing attention to the mine being badly worked since it was turned over to the new company, about 18 months back, more particularly the underground workings. There is not a doubt but you would have a splendid mine, if properly worked. You have everything on the mine that you require for years to come. Your pumping-engine is calculated to put it down 150 to 200 fathoms. You have a splendid drawing-engine, with crusher attached. Look at the ore they bring to surface, worth from 30s. to 40s. per ton, being so rich for silver. If they could get 100l. per ton, it would never work under the present management. In conclusion, I would suggest that the shareholders have the mine inspected by some competent authority (say) Captain Gifford, of the Prince of Wales Mine, without delay.—A SHAREHOLDER: London, Sept. 5.

**GREAT LAXEY MINING COMPANY.**—If "Clericus," in the Journal of August 31, will favour me with his name and address, I will reply to his letter.—G. W. DUMBELL, Chairman of Great Laxe: Douglas, Isle of Man, Sept. 3.

**BRYN GWIG.**—This mine has, I believe, been worked by the present company some five years or more. It is now yielding good returns of ore, and will, I expect, soon be enabled to give dividends to its shareholders, thereby rewarding them for their long and patient perseverance. If the agent would be good enough to give the readers of the Journal a slight resume of the extent of the workings, he would confer a favour on many who take an interest in its welfare.—A SHAREHOLDER: Dublin, Sept. 4.

**METALLIC LETTERS ON GLASS.**—"L." (Macclesfield).—Brass letters may be firmly fastened upon glass with a composition thus formed:—Take resin, three parts; caustic soda, one part; and water, five parts: boil these together, and then mix one-half their weight of plaster of paris with it. Not more should be used than is likely to be required, as it sets in less than an hour. If zinc white, or white lead, be substituted for the plaster of paris, the composition will be much longer in hardening.

**PRIMING PREVENTER.**—"F. C." (Manchester).—The apparatus invented by Mr. Luignes, of Lille, consists of a short cylinder placed at the top of the horizontal part of a steam generator, with its axis disposed at right angles to that of the axis of the boiler. The steam-pipe proceeding from the dome opens tangentially into the cylinder through one side. The outlet pipe is forked, each branch opening into the cylinder in the centre of the two ends thereof. A fourth opening made in the bottom of the surface of the cylinder communicates with a pipe which descends to the bottom of the boiler. When the cocks of the steam-pipe are opened, the steam entering the cylinder under pressure in a tangential direction acquires a rapid rotary or whirling motion, and escapes by the two central openings at the ends. During this gyratory motion the drops of water conveyed along with the steam into the cylinder are, by centrifugal force, carried towards the sides and accumulate there. The water will, therefore, escape through the vertical pipe which proceeds from the bottom of the cylinder, and return to the bottom of the boiler, whilst the dry steam passes through the pipes fixed to the centre of the cylinder ends, whence it is conveyed to the engine.

**THE LUCY PHILLIPS GOLD AND SILVER MINING COMPANY (Limited).**—Since my last communication to you relative to this company, I have heard that Capt. Henry James, of Redruth, has forwarded to the company (following upon his previous report) a calculation made by him of the value of the gold and silver contained in a small part of the company's property, which he estimates at above four and a half million pounds sterling. Why the gentlemen connected with the company withhold this communication from those interested I cannot imagine. This calculation, coupled with the announcement made by Captain James in his letter from which I forwarded you an extract, stating that there was any quantity of quartz existing in the mine, may open the shareholders' eyes as to the alleged value of their property. I am myself interested in the success of the company, and shall be glad to know from any of your subscribers what prospect there is of getting the machinery up to the mine before the winter sets in.—A. R. MOLLETT: Austinfriars, London.

**CORNISH CHEMICAL COMPANY.**—In last week's Journal a correspondent, signing himself "Constant Reader," asks for information with regard to the "Arenaceous and Sulphurous Ore Reduction Company (Limited)." Now, if he really is interested in that company, and will forward a letter to me, enclosing real name and address, I shall, with pleasure, give him all the information he requires.—C. PENGILLY: Callington, Cornwall, Sept. 5.

## THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, SEPTEMBER 7, 1867.

## FREE LABOUR, AND TRADES UNIONS.

On Monday two very important demonstrations of colliers took place in two adjoining counties, but for exactly opposite purposes. In Barnsley there was a vast gathering of the miners of South Yorkshire, who, with flags and banners flying, and numerous bands of music, playing all manner of pieces, exhibited the power of Union in the usual fashion. The imposing procession was not only great in numbers, but there was an effective and painful scene introduced into the pageant. The widows of the unfortunate men killed by the explosions at the Oaks Colliery took part in the ceremonial, and dressed in the deepest mourning walked to the place of meeting. The sight was in every way truly painful, and reflected but little credit on the genius of the man who led the poor women to parade their sorrows in public, and caused them to walk to a place where they could distinctly see the scene of the dire calamity which has fallen so heavily upon so many. The object, however, was apparent. Such demonstrations are, in fact, a menace to the masters, and a threat to those workmen who desire to be independent, and free to sell their labour when and where they please. Unfortunately, in South Yorkshire the coalowners could not act together, and the result has been that the Miners' Association are, for a considerable time have been, entire masters of the situation; so much so, indeed, that some proprietors, for peace and harmony sake, cultivate the friendship of the leaders, although they despise them in their hearts. But what has been the result? The men make their own terms as to wages, fix the hours of labour, and refuse to work with any persons who are not Unionists. In fact, good and bad workmen, the improvident and the thrifty, the single man and the married man, are all compelled to work exactly alike. This the South Yorkshire masters feel as acutely as can be, but through want of prompt and united action they are obliged to submit to the galling chain.

On the other side, on the same day, there was a vast assembly at Staveley, to bear witness to the energy of one man, who, single-handed, defied the power of the Miners' Association, and whose advocacy in favour of the freedom of labour has been crowned with a truly historical success. Opposed by some 2000 or 3000 of those in his employ, who, led away by the specious arguments of well-paid demagogues, determined to join the Union, Mr. MARKHAM has received at their hands a testimonial, showing that they have had their eyes opened to the so-called advantages to be gained by associating together for the purpose of enforcing claims which are the means of fettering trade, and seriously injuring not only those who desire to rise, but all who are obliged to work for their bread. No stronger proof of the evils of Trades Unions could be adduced than that given by Mr. CAMPBELL, the chief colliery viewer at Staveley. He stated that in the year 1825, in consequence of strikes, he was driven to seek work as a plate-layers' labourer on the Liverpool and Manchester Railway, but that determined to have no connection with the Union, he had risen to his present position in consequence. Such cases could, doubtless, be enumerated *ad infinitum*. Still the fact that the thousands of miners at Staveley have recanted as they do, and voluntarily come forward to present the man who had so strongly and successfully opposed their desires, shows that they are open to conviction, and when reflection takes the place of impulse, they are capable of arriving at a just conclusion. In the address of the Duke of Devonshire on the occasion alluded to, his Grace happily expressed the cause of their assembling, which he said was to "commemorate a victory on the part of both employer and employed—a victory of good

and judgment on the part of the men, in spite of what I take to be bad advice." Therefore, seeing that Mr. MARKHAM's services have been recognised by the men he opposed in the first instance, and who now admit the justice of his position, we consider that he has not only deserved well of those with whom he is more immediately connected, but of the employers of labour throughout the country, as well as of the intelligent body of workmen who are desirous of raising themselves in the social scale. For the working man to improve his condition, he must be in a position to sell his labour to the best advantage, and the man who assists him to do so is in every respect a public benefactor. From a knowledge of Mr. MARKHAM, we can say there are few men who have done more to benefit those who are in his service, or who has done so much to advance the education of the workmen's children, and it is gratifying to find such valuable services at last meeting with the recognition they so justly deserve.

#### LEAD ON THE MENDIPS—THE "TOWN-FIELD."

The Mendip Hills, in Somersetshire, are known to the miners and metallurgists of the present as the indelible record of lead mining and lead smelting of the past. To the intelligent and thoughtful observer there are here many chapters of most interesting and instructive history. Experiences in metallurgy, ancient and modern, are exhibited and taught, by heaps of slag and thick beds of slime; and slimes and slimes, the refuse and castaway of one generation, are made the profitable source of lead by another. The slimes of ancient lead washings, containing from 5 to 12 per cent. of the metal, have for some time been treated for lead by various companies, and at present we believe there are six different works in operation on the hills, where the lead stuff is either re-washed and smelted, or where, by the Castilian furnace, the metal is obtained from furnaces and flues without any dressing or washing. The works we refer to are all situated on the bed of a stream, and doubtless the lead from the Mendip mines was conveyed from far and near by Roman miners to be washed by the water which still trills through heaps of lead earth that have passed through the hands of many generations of ancient miners. Fields of various kinds of agricultural produce flourish near the stream, and of lime deposits but one particular field of about 15 acres in extent. Although some distance up the sloping ground from the stream has grown a grass of poison to grazing animals, and has as a consequence been for years a profitless possession. The agriculturist having failed to turn the field to profitable account, Messrs. TINN and FRYAR, the lead and mining engineers of Bristol, had their attention directed to the subject by Messrs. Stanley and Washbrough, of Bristol, solicitors for the proprietor.

In examining the field, large pieces of pure galena were discovered here and there over its surface, and the first impressions of the engineers led to the belief that a rich lode or rich lodes of lead had been passed over, and lead ore turned out of them by operations of mining. A number of trial sinkings proved such a theory to be incorrect, but disclosed the existence of well-made sanitary drains, the bottoms of ancient smelting-furnaces, associated with lumps of metallic lead, pieces of crude Roman pottery, and pieces of ware more highly finished, and partially of the character of the beautifully made vases of Etruria. Such discoveries soon led to the conclusion that the field in question was, doubtless, the site of an ancient lead mining and lead-smelting village, also that the smelting-furnaces themselves, and that the pieces of ore lying about, were simply the remains of the heaps of galena brought from mines to be smelted, here in the valley were the washings of poorer ores, but here, in fact, is at present a field, were accumulated heaps of rich galena, which required no preparation for the furnace. A series of assays of the soil of the field, taken from various places, gave from 5 to upwards of 22 per cent. of lead, and 8 ozs. of silver to the ton of lead. In some places this lead-yielding soil is as much as 4 ft. in thickness, and in places quantities of pure galena may be collected.

From enquiries made on the spot, it appears that the field is traditionally known as the "Town-Field." Apart from its value as containing a large quantity of lead, it is truly of immense interest in an antiquarian point of view. Besides the discoveries already noted, several articles of personal adornment have been found, such as a bronze brooch, with streaks of a kind of enamelled colouring; medals of the like description, and a finely fretted ring of gold. Lead, deeply corrugated teeth of some animal, probably those of the wild boar, have also been turned up. The whole soil of the field, from the surface thereof to the sub-clay, is full of interest in point of both curiosity and value. In another portion of our columns is an advertisement, from which will be seen that the field is to be sold on royalty by assay. In moving away the soil, to be smelted for lead and silver, we doubt not that many a valuable relic of ancient Roman art and lore will be found, and that other treasures, apart from argentiferous lead, will repay whoever may happen to become lessee or purchaser.

#### COMMERCIAL WEALTH OF THE UNITED STATES—No. III.

##### PROFITABLE EMPLOYMENT OF CAPITAL.

Resuming the consideration of this important topic, we are not sensible to the effect of the grave political and social changes which are now exerting a most active influence upon the destinies of the United States. There is no reason for despondency, for if we recall the successive foreign wars and party struggles which at various periods have impoverished the country, and have shaken so to its foundations in the Western Continent, since the original declaration of Independence, we shall never fail to perceive that, over the whole country was plunged in the most ruinous and dejected state, it speedily emerged from the troubles into which it had been cast, and, with an energy unparalleled in the history of other countries, sprung up again indomitably and triumphantly to its former position, more with political fortune, and reasserted the right of a powerful independent community to take a foremost place amongst the great civilised nations of the earth. At the conclusion of the second war with Great Britain, which terminated more than 50 years ago, America seemed quite exhausted in the struggle. Later on, at the period of the annihilation of the Old United States Bank, a fearful crisis ensued, which recurred with more or less severity in subsequent years, when our own Great National Bank had been compelled to put the screw on all the great American Houses in London. At this deplorable event, the people constituting the banking and commercial interests in the United States regained speedily both confidence and credit, and up to 1860 their progress in power, wealth, and commercial prosperity was altogether unexampled, and made the new Republic truly the envy and admiration of the world. A still greater triumph than any previously undergone was, however, still impending. As yet unopened in the Book of Time. The domestic civil war broke out, and all Europe stood aghast at the mighty struggle which the two belligerents, the power of numbers and force of capital, waged, not, however, without leaving a *damosa hereditas*, in the shape of a frightful debt, to be dealt with by posterity. And now, what took place after the protracted desolating struggle was over? The Government or the people of the United States sunk ignominiously in the estimation of contemporary nations? Quite the reverse is the fact. Whatever diversity of opinions may exist amongst the various sections of mankind, concerning the origin, conduct, and consequences of the war; however deeply the fortunes and destinies of millions of people have been affected by the result, still the European nations stand amazed at the elasticity of the country which has recovered itself so soon after such a fearful contest, and sinking under the weight of the mighty deeds performed confesses the existence of a power in the Government and people of the United States, which would not only bring them safely, undismayed, and still united, through such a perilous struggle, but whose first efforts upon the restoration of peace was to place the national honour and credit upon a secure foundation. With undiminished energy and practical ability they have dedicated their inexhaustible resources to re-establish and uphold the financial credit of the country, as well as to promote those vast national undertakings which must not only promote employment to the people, but which, with a rare unexampled elsewhere, tends to develop the latent wealth of the inextinguishable powers of the soil, and thereby, in the most effective manner, lightens day by day the springs of industry, which the

war had pressed down to the extremity of human endurance. If the Government of the United States errs at all by deviating from prudent economical principles in its efforts directed to the maintenance of public credit, it leans to the side of magnanimity, prompting them to do too much rather than too little. We all acknowledge that the sacrifices made upon the altar of national credit, whatever may be the final issue of events, are calculated to inspire the world with a sentiment of profound confidence in these laudable efforts, persisted in at all hazards, to maintain their financial credit unimpaired, as the surest foundation of peace, honour, and permanent security.

Public confidence being thus established upon a stable footing, the irrepressible energies of the capitalists and employers of labour in the United States are thus once more placed in a favourable position to revive actively the spirit of industry throughout the length and breadth of the land; and the undertakings already set in motion, sanctioned, and assisted by the supreme Government, bid fair to surpass in magnitude and utility anything heretofore attempted in the form of public national works. It cannot be gainsaid that the Pacific Union Railroad, coupled with the American Central Railway, without which the Union Pacific Railroad is nothing, is one of those astonishing enterprises, the very magnitude of which borders on the marvellous, or, at all events, transcends all our ordinary conceptions of a practicable work. But in the hands of the American, its very boldness constitutes one of its most alluring charms, as it will enable him to point out with pride to an admiring world the wonderful extent of the undertaking, whilst in his own mind he is secretly assured that it will not only be a self-sustaining work, but that hereafter the profits and general benefit accruing therefrom must be enormous, and acceptable to the whole world.

Since the last week a better feeling is creeping over the financial world. The improvement is slow, but, in the absence of some great political disturbing cause, promises to be sure. The influx of the precious metals continues upon a large scale, the corn markets droop, and the magic number of 95, beyond which some shallow people believe that the price of Consols cannot rise, seems to be losing its talismanic power. To all appearances the Heaven-born Tories will once more enjoy the supreme satisfaction of seeing the Government stocks advance to a point which, with good luck, may enable Mr. DISRAELI to repeat the operation for which he so much envied his predecessor, Mr. GOULBURN. A wholesale conversion is one of Mr. DISRAELI's fixed ideas. But, of course, prices must advance considerably to favour the operation. Who can entertain a doubt, if we are approaching such a state of things, but that, as a great number of English railroads having fallen into a deserved disrepute, the next most desirable investments will be those of accreted, well-managed railroads abroad; and that the Union Pacific Railroad and the American Central Railway will be placed on the most favoured footing in public opinion. They are presented to the English public with their respective intrinsic merits stamped upon their features, and their undeniable utility has already secured them a safe position in the treasury of accepted facts.

Not a day now passes over, after a long and distressing trial of strength between the litigating parties, but that the shareholders and creditors of numberless winding-up companies are coming to something like a *rapprochement*. As soon as these private arrangements are completed, the financial markets, so long choked by the glut of shares locked up, but ready to be thrown upon the Stock Exchange whenever practicable, will easily absorb every security of ultimately exchangeable value, and we ought to thank Messrs. BELLOT DES MINIERES Brothers for enlightening the public upon such important questions. The common-sense value of their special undertaking is their own best title to the confidence of the public. It demonstrates beyond dispute the soundness of the undertaking, not only by the inexorable logic of facts recapitulated with irresistible force in their admirable work, the timely publication of which removes a world of prejudices which hovered over the two hemispheres, to the great damage of every investor, large or small.

#### MINERAL WEALTH OF THE UNITED STATES.

The yearly production of pig-iron by the furnaces of Great Britain 40 years ago was a little under 700,000 tons, and that of the United States the same year about one-fifth as much, or 140,000 tons. The production last year may be taken in round numbers for Great Britain 5,000,000 tons, and the United States at 1,250,000 tons, showing an increase of the effect of which upon the world cannot be estimated by mere figures. The total product of the world at the two periods may be stated at a little over 1,000,000 tons 40 years ago, and at 9,000,000 tons per annum at present. The following table best exhibits the distribution of coal, oil, and iron, with the extent of the various coal fields in the United States. Those fields marked with a \* have iron contiguous to the coal, and those with a † have both iron and oil.

##### AREAS OF AMERICAN COAL FIELDS.

Massachusetts and Rhode Island, anthracite . . . . .	300
Pennsylvania* . . . . .	470
Pennsylvania†, bituminous . . . . .	12,656
Maryland, * ditto . . . . .	550
West Virginia, † ditto . . . . .	15,000
East Virginia, * ditto . . . . .	225
North Carolina, * ditto . . . . .	45
Tennessee, * ditto . . . . .	3,700
Georgia, ditto . . . . .	170
Alabama, † ditto . . . . .	4,300
Kentucky, † ditto . . . . .	13,700
Ohio, † ditto . . . . .	7,100
Indiana*, ditto . . . . .	6,700
Illinois, ditto . . . . .	30,000
Michigan*, ditto . . . . .	13,000
Iowa, ditto . . . . .	24,000
Missouri*, ditto . . . . .	21,000
Nebraska, ditto . . . . .	4,000
Kansas, ditto . . . . .	12,000
Arkansas*, ditto . . . . .	13,000
Indian Territory, ditto . . . . .	10,000
Texas, ditto . . . . .	3,000
Oregon, ditto . . . . .	500
Oregon, anthracite . . . . .	100
Washington Territory, bituminous . . . . .	750
West of Rocky Mountains, ditto . . . . .	5,000

Total square miles . . . . . 200,266  
The tertiary coals and lignites, together with the yet undiscovered deposits around the Rocky Mountains, will make probably 200,000 more. The total area of the coal fields of Europe is 9775 square miles. In addition to the iron, which from the table will be seen to accompany the coal in nearly every field, it is found in many places where the coal is not. One deposit, as it is probably the largest known in the world, will be enough to satisfy us that there is no fear of a lack of the most useful metals for a long time to come.

COMMERCIAL WEALTH OF CENTRAL AMERICA.—In a Supplement to next week's Journal we shall publish an elaborate paper, by Capt. BEDFORD PIM, R.N., on the Chontales Mining District—Nicaragua, illustrated by a map of the country. The paper was read on Thursday before the Geographical Section at the British Association for the Advancement of Science, where it was received with considerable interest, as the increasing commercial importance of the part of the world on which it treats renders authentic information very desirable, especially as so little respecting it has hitherto been obtainable.

IMPORTANT EXPERIMENTS WITH COLLIERY SAFETY-LAMPS.—On Wednesday a series of experiments, with the view of testing the various lamps at present in use, were made at the Barnsley Gasworks, in the presence of the principal colliery viewers in the district. Amongst those present were Mr. Morrison, of the Pelton Colliery, Durham, who brought with him two lamps, which he has recently patented, and Mr. Mills, a member of the well-known firm of lamp makers in Newcastle. One of the principal changes in Mr. Morrison's No. 2 patent is that the glass is outside the gauze, whilst there are some slight improvements in the top and cap. On being tested, the first lamp exploded, but that arose from its not being rightly fixed. A second one, however, after being subjected to an atmosphere of gas, and a strong current of air, kept in for a considerable time, and exhibited a faint blue light at the top of the lamp for upwards of 14 minutes. The ordinary Davy and Clanny lamps, as usual, exploded, showing that for all purposes of safety they are not to be depended upon, so that their use in all mines of a fiery character ought not to be tolerated. The old Stephenson, or "Geordie," appears so far to be one of the most reliable, and did not explode. With certain improvements suggested by the colliery stewards, and also by Mr. Mills, there is every probability that the Stephenson can be made nearly all that is required of a safety-lamp. The Morrison lamps appeared to give satisfaction, and of which more will, in all probability, be

heard hereafter. Similar experiments, it appears, have recently been made at Hetton Colliery, in Durham, as well as by some makers, including Mr. Mills; and as the subject has been taken up by the North of England Institute of Mining Engineers, the result, it is said, will shortly be made known. The importance of the subject is fully shown by the great interest taken in the experiments in nearly all the colliery districts in the kingdom; and in Barnsley not only the viewers and stewards, but all persons acquainted with lamps, including Mr. Morrison and Mr. Mills, are sanguine that the investigation will result in the production of a really good and efficient safety-lamp, which has so long been desired, as a means of indicating the presence of gas, and so preventing the loss of life.

#### MINING, METALS, AND MINERALS—PATENT MATTERS.

BY MICHAEL HENRY,

Patent Agent and Adviser, Memb. Soc. Arts, Assoc. Soc. Eng.

A provisional specification of an application for patent, No. 111, but not proceeded with, in the name of JOHN CLAYTON, of Bromwich, has lately been published. It relates to vertical furnaces for melting and refining metals. He makes the body of the furnace of a cylindrical figure, terminating at top by a cone, which cone is surmounted by a chimney about three times the height of the furnace. The chimney is closed at top by means of a damper or dampers, which may be provided with counterbalance weights. The furnace is supported on four cast-iron pillars, which may be protected on two sides by brickwork. Underneath the furnace and between the columns is a tramway, on which wagons run for receiving the scoria from the furnace. The bottom of the furnace is provided with a door, from which the scoria falls from the furnace into the wagons. At the conical part of the furnace are doors, at which the iron and fuel are introduced, and around the conical part of the furnace is a gallery, to which the iron and fuel are hoisted by hydraulic or other power, and introduced into the furnace. At about one-third the height of the furnace from the bottom is a series of tuyeres or air-passages through the sides of the furnace, and arranged radially, by preference, in three or more rows of twenty-one tuyeres. The tuyeres have covers at their outer ends, so that a row or part of a row of tuyeres can be closed. To prevent the tuyeres from wind, a cylindrical screen or guard, closed at top and opened at bottom, surrounds the furnace. Melted iron is tapped from the furnace, at a hole made in a small door at the bottom and one side of the furnace. He employs a sand bottom on a melted plate while the metal is being melted, but which is removed when the scoria is being taken from the furnace. The furnace is charged with alternate layers of iron and coke, the tuyeres being all opened when the furnace is in full work. When the charge has sunk below the first row of tuyeres, the first row may be closed, and below the other rows they are also closed. Two or more large tuyeres, provided with covers, may be placed near the bottom of the furnace, and these are then employed to carry on combustion. The draft produced by the chimney occasions such a copious supply of air through the tuyeres that no blast is required.

Another provisional specification of an application for patent, likewise not proceeded with, has been printed. It relates to the invention of ROBERT JAMES, of Poole, Dorset, for improvements in the means and apparatus for ventilating mines. According to this description, he proposes to arrange a series of pipes, passing down the shaft or shafts and main passages of the mine, with branch pipes leading into the workings, where they have openings provided, with regulating valves, through which series of pipes the foul air is drawn out by means of pumps or exhausting fans; and he arranges another similar series of pipes, passing down the shaft and main passages, with branches extending into the workings, also having openings, provided with regulating valves, through which series of pipes, fresh air is forced into the passages and workings, by means of pumps or fans. By thus simultaneously supplying fresh air to all parts of the mine, and exhausting the foul air, a most perfect ventilation of the mine is attained. The pumps and fans for blowing in the fresh air and exhausting the foul air are both by preference placed at top of the pit, and worked by one and the same steam-engine, the exhaust steam of which may with advantage be caused to escape from a jet situated in the upcast shaft of the mine, so as to increase the upward draught therein.

The recent applications for patent comprise one in the name of HASSETTINE, No. 2438, for the manufacture of iron and steel (as a communication from Holley, of New York). Also, ELLIOTT, of Southampton, for machinery used in cutting coal, slate, and other minerals, and in forming tunnels and galleries, and for other quarrying purposes, No. 2451; and STONEY and BUCKSHIRE, of Lancaster, jointly with WILSON, of Mile End, for a new method of bronzing metallic and other surfaces, No. 2453—with this last application what is called a complete specification has been filed. The recently sealed patents comprise the following:—BRECKON and DIXON, of Darlington, machinery for conveying, screening, and loading coke and other materials, No. 620.—YOUNG and BRASH, of Mid-Lothian, distillation of bituminous substances, No. 650.—HART, of London, and PARRY, of Birmingham, treating and purifying sewage, and in apparatus to be used for that purpose, No. 788.—BOSNEVILLE, of London, for improved means of readily lighting fuel and lighting fires (a communication from Pilon de St. Paul, of France), No. 974.—SADLER, of Surrey, furnaces for consuming smoke, No. 1749.

#### FOREIGN MINING AND METALLURGY.

The smaller French metallurgical establishments complain of a want of orders. The large works, which dispose a considerable capital, are alone able to resist the general depression, and they can only do so by excessive sacrifices, which render the state of affairs still more intolerable to the small firms. Creusot, that redoubtable adversary of establishments disposing only small means, is restricting every day the radius of the outlets of the Haute-Marne works; thus its ordinary iron is offered on the Nantes market at 84. 4s. per ton, while works of the Haute-Marne can only "cede" similar qualities at the rate of 81. 8s. 10d. per ton. The drought also interrupts the operations of forges which are situated on water-courses, and for establishments so circumstanced, have decided on shortly extinguishing their blast-furnaces. This decision has not been adopted only from the accidental influence of drought, but the general state of siderurgical industry has also a good deal to do with it. In the Moselle group affairs do not improve, and the price of pig is so comparatively unremunerative that foremasters are asking whether it would not be more advantageous to purchase pig at present prices than to produce it. In this case again, it would appear that the influence of the great establishments makes itself felt, as Creusot forwards its pig to be recast in the Moselle group. The remedy generally invoked is an understanding with a view to the restriction of production. Imports of pig from Germany and England are stated to be proceeding rather actively. Swedish irons are beginning to arrive. The Loire Mines Company will pay, Oct. 16, a dividend for the first half of 1867, of 5s. per share. Meetings are announced as follows:—Longterre-Ferrand Colliery Company, Sept. 12, at Elonges; and Sougland and Fourmies Forges and Foundries Company, Sept. 28, at Paris.

The prices at which the twenty locomotives, just contracted for for the Belgian State Railways have been let are stated at between 467, and 507, per ton. This price is pitifully low when compared with that obtained last year, which was 697, per ton, and the inference is irresistible that industry has much to complain of in Belgium at present. There is no change to note in the Belgian coal trade. Some deliveries by water and by railway maintain a certain movement without scarcely any importance; stocks do not diminish, and the extraction remains restricted. The Providence Forges Company will pay, Oct. 31, a dividend for the exercise 1866-7, of 21. 2s. per share. The Paradis, Avroy, and Boverie Colliery Company is paying a dividend for the first half of 1867, of 18s. 4d. per share. The Falmouth Colliery Company, at Courcelles, is paying a dividend for the first half of 1867 (coupon No. 22). Meetings are announced as follows:—United Proprietors' Colliery Company, Sept. 10, at Marchiennes-au-Pont; Pieton-Colliery Company, Sept. 17, at the Châtel; Luxembourg Mines and Sarrebruck Forges Company, Sept. 17, at the Châtel; back Works near Sarrebruck; Rhenish Belgian (Ruhr) Collieries Company, Sept. 17, at Dusseldorf; and Sars-Longchamps and Bouvy Collieries Company, Oct. 31, at St. Vaast.

The Imphy and St. Seurin Steelworks Company, founded in 1863, represents the union of the Imphy Works, belonging to Boigne, Rambourg, and Co., and the St. Seurin Works, belonging to Jackson and Co., then in liquidation. The capital of the new company was fixed at 240,000, divided into 12,000 shares, of 20l. each. Of these shares, 3400 were given to the old Imphy proprietors, and 3474 to the St. Seurin proprietors; the remaining 5126 shares formed the floating capital. The fusion of the two enterprises was, however, far from improving their individual position. At the outset even, the orders on hand proved insufficient to maintain the two works in activity, and it was resolved to abandon the working of the St. Seurin establishment, the accounts of which indicated an annual loss of from 8000l. to 12,000l. The Council of Administration did not, however, put this plan immediately into execution, as it waited in the hope that the position of the St. Seurin Works would improve. It is only after examining the results of the past exercise that the council recognised the absolute impossibility of continuing the working of the establishment on the same time. The accounts of the past year resulted, in effect, in a loss of 10,200l., since, although the Imphy Works raised a profit of 5000l., the accounts of the St. Seurin establishment showed a loss of nearly 15,200l. The measure now decided on, although adopted rather tardily, will, doubtless, involve an improvement in the position of the undertaking. The Dutch Indian Gas Company—an enterprise with a share capital of 175,000l., in 7000 shares—has presented an encouraging report to its shareholders. The company has tried Australian coal in the manufacture of its gas; but, notwithstanding the favourable results obtained, the management still finds itself obliged to use English coal, from the want of a regular navigation service between Batavia and Australia. The use of the company's coke is being sensibly developed; thus, while the sales made in 1865 amounted to 524 tons, they rose in 1866 to 1029 tons. The dividend of the company for the past year is at the rate of 5½ per cent. per annum, a sum of 2500l. being carried to the reserve.

There is not much of a novel character to note in connection with Prussian metallurgical industry. Orders for rails have become scarce for more than a month past, but the sale of iron in bars has been developed to an extent sufficient to keep the works in activity; prices have not experienced any fall, but they are maintained without firmness. Some works of the Rhenish and Westphalian groups have received orders for Bessemer steel rails for the administration of the Leipzig and Dresden Railway. Almost all the Prussian railway directions have begun to bring Bessemer steel rails into use, and there is little doubt that their employment will become general. The Berg and Mark Railway, which is under the direction of the State, displays great activity, and carries on a rude competition with the Cologne and Minden line; this fact tends rather to the advantage than otherwise of industrial in the Steele district. Complaints are made of the high price of minerals, the demand for which has much increased, especially in the Siegen district. It should be remarked, however, that mineral derived from this source is of su-

During the past week an impetus has been given to the Steam Coal Trade, consequent upon the expected increase in the demand for the Abyssinian expedition. A number of steamers will be required by the Government, and the demand for coal on account of them has caused a considerable rise in the price of freights, particularly to Bombay and the Cape. The signs of improvement, however, which have already been manifested will be materially checked if the telegram announcing the liberation of the Abyssinian prisoners proves to be correct; and although no confirmation of the news, *via* Constantinople, has been received at the Foreign Office, nothing has transpired to throw discredit on the telegraphic communication. [Official advices received at the Foreign Office yesterday states that

the Greek patriarch at Cairo, by whom the bishops were despatched to Abyssinia, had heard nothing of the release of the prisoners.]

The workmen engaged at the Aberdylais tinworks have been treated by their employers, Messrs. Williams and Co., to a trip to Gloucester and back. Husbands were accompanied by their wives, and young men by their sweethearts. They were all highly pleased with the various objects of interest that abound in the ancient city, the cathedral being the chief object of attraction.

At the Great Western Colliery Company (Limited) meeting, the directors recommended a dividend of 4s. per share, making, with the interim dividend declared in March, about 6½ per cent. per annum on the paid-up capital.

The Crown Preserved Coal Company (Limited), whose works are in Glamorganshire, have declared a dividend at the rate of 6 per cent. per annum for the past half-year.

The Aberdare and Central Wales Junction Railway directors report that an Act of Parliament sanctioning the construction of the line was obtained the session before last, but that, in view of the present financial condition of railway enterprise, it has not been deemed advisable to push on the works. The shareholders are assured that no expenses beyond what are absolutely unavoidable are being entered into, and that no liability is being incurred in their name.

Another important line of railway has just been opened in South Wales—the Neath and Brecon, which, in conjunction with other lines, will open up a new route from a large portion of the South Wales district to the Midland Counties. The junction between the Neath and Brecon, and the railways conveying towards Hereford, the last uncompleted link in the chain, is also now completed, and Messrs. Aberdare, the chief agent of the Welsh iron, coal, and copper trades, are by this means in direct communication with the Midland Counties. The trade between the two districts has for several years past been gradually increasing, and now that railway extension has so added to the facilities of transit, there is no doubt that the result will be a further increase in the intercourse of the two districts.

At the Penarth Dock, Harbour, and Railway Company meeting the report expressed regret at the unsatisfactory condition in which the affairs of the company stood, and the directors, in consequence, advised that there should be no dividend for this half-year. The Chairman entered into a lengthy and complicated statement of figures in connection with the accounts, and showed that they had exceeded their parliamentary capital by £1000. The difference which had existed between the company and the estate in bankruptcy of their late contractors, Messrs. Knight and Smith, involving an amount of £100,000, was in course of arbitration, and it was hoped would be very soon brought to a satisfactory termination. The directors had been compelled to enter upon a suit in Chancery against the Taff Vale Railway Company, and, in consequence of the various difficulties which existed in the affairs of the company, they thought it most desirable that there should be no dividend this half-year, but that the money in hand should be reserved for the purpose of defraying the expenses of the law proceedings, and other outgoings, in which the company were involved. The Chairman made further explanations, which appeared to be satisfactory to the shareholders present, and a resolution was passed adopting the report, and approving the prosecution of the suit in Chancery against the Taff Vale Railway Company.

**FOREST OF DEAN.**—Strikes in this district are, perhaps, as rare as the "rarest of the rare," but in spite of the "rarity" it is now a reality. Considering the succession of the plenty of trade here, at least during this year, and more especially that great demands have and are daily being made upon all kinds of labour, it is somewhat surprising that the least possible reason has been given for such an event, even in its most minute form. This is truly an age of surprises as well as an "iron age," and the thing of to-day may have a very different aspect and hold a different position to-morrow. There is an old maxim, "Content is the true philosopher's stone," and again, "Rest and be thankful." Both of these are very admirable in their place, but as no one knows where the shoe pinches except those who wear it, so it does not at all times appear expedient to condemn the working man when he does not amiably sit down, or hammer away at his forge when that quiet resignation would mean a loss of so much per week out of his hard earnings, which just now needs all the economy of his better half to make both ends meet. Still the master must not be forgotten, and while bearing in mind there has been no scarcity of orders, the price of iron has been for a considerable length of time low, and where heavy transit has to be paid the pressure must be felt very heavily by the masters. Now, it happens that the Messrs. Russell, of Lydbrook, at whose works this unfortunate strike has taken place, are amongst the sufferers who have groaned under the want of proper, reasonable, and equitable railway communication with their works. A month ago notice was given to the workmen employed at the iron forge at Lydbrook that a reduction of 6d. per ton would be put in force on Sept. 1. The workmen failing to recognise the necessity for such a step, determined not to submit, and accordingly on Monday they refused to return to their work. Happily for themselves, happily for the masters, and happily for the neighbourhood, these men are not in any way connected with Trades Union Societies, hence it cannot extend itself to any lengthened period, determining though they were at the beginning of the week not to submit to a reduction.

In the neighbourhood of Coleford there is considerable animation just now, and has been for the last few months, in the digging of mine. This branch of the Forest of Dean mineral has certainly received this summer more than ordinary attention. The agriculturists around the neighbourhood of Coleford complain that they cannot find men to attend to harvesting, and when they do offer themselves they want an exorbitant price for their labour, besides rivers of cyder, or some equally cheering substitute. Generally speaking, with regard to the Forest of Dean business in all its branches, it bears the same favourable position that so long has characterised it, and there is every outward indication to-day of this state of things identifying itself with the district for some time to come at least. On Saturday last it was widely reported through the district that a most painful accident had taken place at the Great Western Company's colliery, in course of sinking at Bilson Green. It may be here mentioned that several notices have already appeared of the progress of these works. The company, it will be remembered, are sinking for the deep measure coal of the Forest. It would appear that on Friday seven men were sinking at nearly 200 yards distant from the top of the shaft, and the engine was drawing up a large vessel of water—this being the mode of carrying off the water—and when within a few yards of the top the iron chain connected with the rope and vessel snapped, and the vessel was hurled to the bottom with a tremendous crash. It was naturally thought that the men employed below must have been killed instantly by the fall, and hence the report. Fortunately, however, it was found, when after a considerable time someone was able to go down, that not a man was hurt, the vessel having fallen in the middle, they standing on either side, and their escape seemed a most miraculous circumstance.

#### INDIA-RUBBER, GUTTA-PERCHA, AND TELEGRAPH WORKS COMPANY (LIMITED), MANUFACTURERS OF VULCANISED INDIA-RUBBER

BUFFER SPRINGS FOR LOCOMOTIVES AND RAILWAY TRUCKS, VALVE SHEET, WASHERS, SUCTON AND DELIVERY HOSE, TUBING FOR GAS, &c., MACHINE BELTING, ELASTIC STEAM PACKING IN ROPE, SHEET, AND RINGS, &c., &c.

#### EBONITE

SHEET, PUMPS, TAPS, TUBING, &c., for acids and vinegar; PHOTOGRAPHIC AND SURGICAL ARTICLES, SPEAKING TUBING, &c.

#### GUTTA-PERCHA

SHEET, TUBING, PUMP BUCKETS, VALVES, MACHINE BELTING; VESSELS for chemicals and acids, &c.; WATERPROOF CLOTHING, HOT-WATER CUSHIONS, MATTING, GROUND SHEETS, APRONS, WAGON COVERS, &c., &c.

#### TELEGRAPH INSTRUMENTS,

INSULATORS, BATTERIES, INSULATED WIRE, and every description of TELEGRAPH APPARATUS AND STORES. Vulcanised India-rubber specially prepared to withstand the action of Tropical climates. WORKS, SILVERTOWN, ESSEX.

**NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS,** 16, COZELL STREET NORTH, BIRMINGHAM. STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—REFINED METALLIC NICKEL, REFINED METALLIC BISMUTH, OXIDE OF COBALT, GERMAN SILVER—IN INGOTS, SHEET, WIRE, &c., NICKEL AND COBALT ORES PURCHASED.

**GOLDENHILL, COBALT, NICKEL, COLOUR, BORAX, AND CHEMICAL WORKS,** NEAR STOKES-UPON-TRENT, STAFFORDSHIRE. JOHN HENSHALL WILLIAMS, MANUFACTURER AND REFINER, Purchaser of Borate of Lime and Tincal.

Teacher of Practical Mining in the late Mining School of Cornwall, and Principal of the Engineering Academy, 36, Upper Parliament Street, Liverpool.

**SAFETY FUSE.**—Messrs. WILLIAM BRUNTON AND CO., PENHALLICK, POOL, near CAMBORNE, CORNWALL, and BRYMBO, near WREXHAM, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe.

For the convenience of their customers and others in the North, W. BRUNTON and Co. have recently erected a branch manufactory at Brynbo, near Wrexham, where, as at Cornwall, they are at all times PREPARED TO EXECUTE UNLIMITED ORDERS FOR SUPPLYING FUSE, upon warrant that it will be equal to, if not better than, any to be procured elsewhere.

**BASTIER'S CHAIN PUMP.**—This patent pump is the MOST EFFICIENT in existence for LIFTING ANY QUANTITY OF WATER from ANY DEPTH. One lifting from a depth of 170 ft. may be seen at work daily, on application to the

SOLE LICENSEES, Messrs. J. JACKSON AND CO., ENGINEERS, 17, GRACECHURCH STREET, LONDON, E.C.

Who SUPPLY PUMPS AND LICENSES. Communications to Mr. Bastier, the patentee, to be sent to the same address. AGENT FOR THE COUNTIES OF NORTHUMBERLAND AND DURHAM, YORKSHIRE, DERBYSHIRE, AND NORTH STAFFORDSHIRE, Mr. THOMAS GREENER, MINING OFFICE, NORTHGATE, DARLINGTON.

AGENTS FOR SCOTLAND, Messrs. P. and W. MACLELLAN, 137 and 129, TRONGATE, GLASGOW.

**CAPTAIN DAVID ROBERTS, SLATE ROCK INSPECTOR,** LILLYFIN, near CARNARVON. Capt. ROBERTS having recovered from his recent indisposition, is now prepared to inspect and report on any slate or mining property in Wales. Letters addressed as above will be promptly attended to.

#### Contract for Pig Iron.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA.



**NOTICE IS HEREBY GIVEN** that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before Monday, the 16th instant, to RECEIVE PROPOSALS, in writing, sealed up, from such persons as may be willing to SUPPLY—SEVENTY TONS OF PIG IRON.

And that the conditions of the said contract may be had on application, addressed to the Director-General of Stores, India Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M., of the said 16th day of September, 1867, after which hour no tender will be received.

India Office, Sept. 5, 1867. GERALD C. TALBOT, Director-General.

#### Contract for Salt Pork.

CONTRACT DEPARTMENT, ADMIRALTY, SOMERSET HOUSE.



**THE COMMISSIONERS** for Executing the Office of Lord High Admiral of the United Kingdom of Great Britain and Ireland, do hereby give notice that on TUESDAY, the 1st October next, at Twelve o'clock at noon, they will be READY TO TREAT with such persons as may be willing to CONTRACT for SUPPLYING and DELIVERING into Her Majesty's Victualling Stores at the undermentioned ports, the following quantities of

#### SALT PORK.

All of the cure of the present season, viz.,—Navy Pork. DEPTFORD..... 4800 tierces 4800 barrels. HAULBOWLINE..... 2400..... 2400

Each tierce of pork to contain 75 pieces of 4 lbs. each, and each barrel 50 pieces of 4 lbs. each, instead of the number of pieces formerly contained in the tierces and barrels.

The pork to be delivered into the respective stores as follows, viz.,—one-third of each quantity for each place by the 15th day of January, 1868; another third thereof by the 5th day of March, 1868; and the remainder thereof by the 30th day of April, 1868; or any greater portion, or the whole, at any earlier period, if preferred by the party tendering, and to be paid for by bills at three days after date, which will be sent to parties as usual.

Their lordships reserve to themselves the power, when the tenders are opened, of contracting either for the whole, or for such part thereof only as they may deem fit, or for a greater quantity, or of not contracting for any, and also an unlimited power of selection in accepting the tenders.

Every tender must specify the name of the person by whom the meat is intended to be cured, the brand of the meat, and the place of cure.

Tenders for pork of the cure of the United States of America will not be admitted. Persons tendering for more than one port must give a separate tender for each port.

Persons tendering must give a reference to a banker for each surety proposed; and they are desired to take special notice that the use of wooden hoops is abolished, and that iron hoops only will be required for the casks, in accordance with the conditions of the contract.

A form of the tender may be obtained, and the recently altered conditions of the contract, to which particular attention is called, may be seen in the Lobby of the Department of the Controller of Victualling, Somerset House; at the Victualling Yards at Gosport and Plymouth; or by applying to the Agent Victualler at Haulbowline; or to the Collectors of Her Majesty's Customs at Bristol, Limerick, Belfast, Waterford, and Newry; or to the Secretary to the Postmaster-General at Dublin; or to the Commander conducting the Packet Service at Liverpool.

No tender will be admitted for a less quantity than 100 tierces, or 100 barrels.

No tender will be received after Twelve o'clock at noon on the day of tender, nor any notice unless made on the printed form provided for the purpose; but it will not be necessary that the party tendering, or an agent appointed by him, should attend, as the result of the offer received from each person will be communicated to him and to his proposed sureties in writing.

Every tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner of the envelope the words "Tender for Salt Pork," and must be delivered at the Department of the Controller of Victualling, Somerset House.

The contractors will have to pay one-half the amount of the stamps on the contracts and bonds.

By order, ANTONIO BRADY, Registrar of Contracts and Public Securities.

Contract Department, Admiralty, Somerset House, Aug. 24, 1867.

**IN** the course of the month of FEBRUARY, 1868, on a day to be fixed hereafter, will be PUBLICLY SOLD, to the highest bidder, by the COMPANY FOR THE PROMOTION OF OPENING MINES IN NETHERLANDS INDIA, in liquidation, and after future approval by Government.

THE CONCESSION FOR THE WORKING OF THE COAL MINES AT BANJOE-IRANG (KALANGAN), situated in the residency south, and eastern division of Borneo, together with the WORKS at the MINES, erected by the company, in such condition as they may be found on being taken over.

Information can be obtained at Amsterdam, from Messrs. HEKEREN and Co., while the original documents are kept for investigation at the office of Messrs. TIEDEMAN and VAN KERCHER at this place.

J. J. BLANCKENHAGEN, G. A. DE LANGE, D. JANNETTE WAGEN.

Batavia, 12th April, 1867.

#### FOR SALE.

**THE MONMOUTH FORGES CHARCOAL IRONWORKS.**

THE WORKS consist of ONE DANDY FIRE, THREE REFINERIES, TWO PUDDLING FURNACES, HAMMERS, HOLLOW FIRES, and MILL POWER, complete in every respect, and in excellent repair (much of it being nearly new), and now in full work, making 40 tons per week of best charcoal bars, in addition to which there are all the appliances for making 25 to 30 tons per week of best cast bars; there is, also, a NEW SHEET MILL, capable of turning out 20 tons of sheets per week.

The works are situated in a district abounding in wood for charcoal, and in direct railway communication with the chief manufacturing towns of England and South Wales.

The blowing-engine and all the machinery is worked by water-power, of which there is an ample supply; but there is also steam-engine power erected, and in dry seasons used as an auxiliary power, when needed.

There are a manager's house and twenty-one workmen's cottages attached to the works, together with upwards of 20 acres of fine meadow land, and the whole is held under a lease for twenty-one years, of which sixteen are unexpired, at a very moderate rent.

To the capitalist desirous to purchase and enter upon a lucrative business without any delay, these works offer advantages seldom combined. Apply to JOHN LAWRENCE, Esq., Cwmbran Ironworks, Newport; or to the manager at the works; or Mr. NORTON, solicitor, Monmouth.

**SHALE OIL WORK FOR SALE.**—TO BE SOLD, the whole BUILDINGS, HOUSES, and WORKS, MACHINERY, ENGINES, REPORTS, FITTINGS, PLANT, and ROLLING STOCK, at the work known as

THE ROMAN CAMP OIL WORK, NEAR BROXBURN; Together with the INTEREST of the present tenant in the UNEXPIRED PERIOD of the LEASE of the SHALE FIELD adjoining, granted by the trustees of the Earl of Buchan to Messrs. William Fraser and William Fraser, Jun., for nineteen years, from Martinmas, 1864.

For further particulars apply to ADAM GILLIES SMITH, C.A., No. 59, George-street, Edinburgh; or to Messrs. J. and J. GARDNER, S.S.C., No. 46, Hanover-street, Edinburgh; by the former of whom sealed offers will be received up to 20th September proximo; but the proprietors reserve power to accept any or none of the offers made.

Edinburgh, 59, George-street, 23d August, 1867.

**TO COALMASTERS AND OTHER CAPITALISTS.** VALUABLE COLLIERY, EMBRACING SIX HUNDRED ACRES, IN NORTH STAFFORDSHIRE.

**TO BE SOLD, OR LET ON LEASE, an EXTENSIVE COLLIERY,** now in full operation, situated in the centre of the North Staffordshire Coal Field, and including the whole of the seams of coal and ironstone usually found in the pottery district.

The property consists of about 600 acres, and the colliery is in full working order, and doing an extensive business. The pumping and winding engines and other plant are of excellent construction, and in good repair—and a large extent of level driving and other dead work having been recently done, the output may be greatly increased.

The situation is unusually eligible, being in close proximity to two of the Pottery towns, and as a line of railway (for which an Act has been obtained) is about to be constructed through the centre of the estate, the colliery will shortly be placed in direct communication with the whole of the populous district of North Staffordshire and other places on the North Staffordshire Railway.

For further particulars, and to treat, apply to JOHN LANCASTER, Esq., Hilton Grange, Rugby, or to KEARY and SOX, solicitors, Stoke-upon-Trent.

**SLATE QUARRY FOR SALE.**—A FREEHOLD ESTATE, of about SIXTY FOUR ACRES of Arable and Pasture LAND, in the county of DEVON, with a SLATE QUARRY thereon, yielding a large monthly return of SLATE, commanding the best prices in the market, and capable of greatly extended development. The property is OFFERED FOR SALE, in consequence of the means of the proprietors being inadequate to the outlay desirable for its full working.—For particulars, apply to J. F. WILLIAMS, Esq., No. 10, Queen's-square, Bloomsbury, London.

#### COUNTY OF WICKLOW.

**TO BE LET,** on such terms as may be agreed upon, the GLENMALUR LEAD MINE.

In the townland of BALLINAFUNCHOGH, barony of BALLINACOR NORTH, and county of WICKLOW.

The mine is situated on the east side of the valley of Glenmalur, about eight miles from the town of Rathfriland, in a mineralised district of great promise. It has been worked for a considerable time up to a recent period, and was very productive.

A large water-wheel, connected with a pumping apparatus, is at present employed keeping the workings clear of water. A railway is laid through, and in the adit level. Abundant supply of water power is available from the Avonbeg River adjoining, and other sources. Timber for use of the mine can be obtained on advantageous terms on the grounds. Houses suitable for the superintendents and workmen, offices, and workshops, are on the premises, and land can be given for any further accommodation that may be necessary.

Parties desirous of proposing for the mine can obtain particulars, as to its extent, state, and conditions on which it will be let, on application to JOHN HILL, Esq., Civil Engineer, Ennis.

Proposals will be received by Messrs. G. and B. K. JOHNSTON, Dundalk. Dundalk, 20th of August, 1867.

#### RAILWAY WAGON WORKS, BARNESLEY.

**MESSRS. G. W. AND T. CRAIK** ARE PREPARED TO SUPPLY COAL AND COKE WAGONS OF EVERY DESCRIPTION, Either for cash, or by preferred payments through wagon-leasing companies. WAGONS PROMPTLY REPAIRED.

**WILSON'S PATENT SMOKELESS FURNACE.** LICENSEES AND SOLE MANUFACTURERS HICK, HARGREAVES, AND CO., SOHO IRONWORKS, BOLTON.

These furnaces are now in full operation, and are giving most satisfactory results, both as regards economy in fuel, complete consumption of smoke, and small wear and tear of furnace. They may be seen in daily operation at these works.

**THE BEVERLEY IRON AND WAGON COMPANY (LIMITED),** MANUFACTURERS OF RAILWAY WAGONS, WHEELS, AXLES, LORRIES, CARTS, WOOD WHEELS, &c., IRONWORKS, BEVERLEY, YORKSHIRE.

**NORTH CENTRAL WAGON COMPANY,** ROTHERHAM.

**RAILWAY WAGONS** of ALL DESCRIPTIONS to be SOLD or LET.—FORTY 8-ton COAL WAGONS (only run for three months) TO BE LET as SECOND HAND. A FEW COKE WAGONS, in good condition, TO BE LET as SECOND HAND.

Application to be made to Mr. BARRAS, Secretary, Rotherham.

**GLAHOLM AND ROBSON,** HENDON PATENT ROPE, SUNDERLAND, MANUFACTURERS OF ALL DESCRIPTIONS OF STEEL, IRON, and HEMP ROPES for COLLIERIES, SHIPS, &c.

**HERBERT AULT, ENGINEER,** DRAUGHTSMAN AND PATENTEES' ASSISTANT, VALUER OF MACHINERY, IRONWORKS, RAILWAY and COLLIERY PLANT, and other works; DESIGNER and CONTRACTOR for every description of RAILWAY and COLLIERY PLANT, CONTRACTORS' and other LOCOMOTIVES, HOT AIR and HOT WATER APPARATUS, &c.

Preparer of models &c., for patentees, and every other assistance given upon the most moderate terms. Estimates given for taking down and erecting works and other machinery.

Applications addressed to HERBERT AULT, Netherton, near Dudley, will meet with prompt attention.

N.B.—HERBERT AULT begs to call the attention of gentlemen about to put up greenhouses or conservatories to his large assortment of designs at exceedingly low prices.

**MESSRS. J. EVANS AND CO.,** MANUFACTURERS OF MINERS' SAFETY LAMPS, &c., 15, HENRIETTA STREET, BIRMINGHAM.

**NICHOLLS, MATHEWS, AND CO., ENGINEERS,** BEDFORD IRONWORKS, TAVISTOCK. MANUFACTURERS OF STEAM ENGINES OF EVERY DESCRIPTION, made on the BEST and NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the MANUFACTURE of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS OF EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON and HEAVY SHAFTS OF ANY SIZE. CHAINS made of the best iron, and warranted. MINERS' TOOLS and RAILWAY WORK OF EVERY DESCRIPTION.

ALL ORDERS FOR ABROAD RECEIVE THEIR BEST ATTENTION. NICHOLLS, MATHEWS, and Co. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required.

Messrs. NICHOLLS, MATHEWS, and Co. have always a LARGE STOCK of SECOND-HAND MINE MATERIALS in stock, and at moderate prices.

**PATENT FLEXIBLE TUBING,** AND BRACE CLOTH FOR MINES, MANUFACTURED BY ELLIS LEVER, PATENTEE, WEST GORTON WORKS, MANCHESTER.

**WILLIAMS'S PERRAN FOUNDRY COMPANY,** PERRANARWORTH, CORNWALL. MANUFACTURERS OF STEAM PUMPING and EVERY OTHER KIND of ENGINES, together with BOILERS, PUMP CASTINGS, and MINING TOOLS of every description, of the very best quality. Estimates given for the supply of any amount of machinery.

London Agent—Mr. EDWARD COOKE, 76, Old Broad-street, London, E.C.

**RAILWAY CARRIAGE COMPANY (LIMITED)** ESTABLISHED 1847. OLDBURY WORKS, NEAR BIRMINGHAM. MANUFACTURERS OF RAILWAY CARRIAGES and WAGONS, and EVERY DESCRIPTION of IRONWORK.

Passenger carriages and wagons built, either for cash or for payment over a period of years. RAILWAY WAGONS FOR HIRE. CHIEF OFFICES—OLDBURY WORKS, NEAR BIRMINGHAM. LONDON OFFICES—6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER.

**THE BIRMINGHAM WAGON COMPANY (LIMITED)** MANUFACTURE RAILWAY WAGONS OF EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract. EDMUND FOWLER, Sec.

WAGON WORKS.—SMETHWICK, BIRMINGHAM. Loans received on Debenture; particulars on application. London Agent—Mr. E. B. SAVILE, 67, Victoria-street, Westminster, S.W.

**STAFFORDSHIRE WHEEL AND AXLE COMPANY (LIMITED).** MANUFACTURERS OF RAILWAY CARRIAGE, WAGON, and CONTRACTORS' WHEELS and AXLES, and other IRONWORK used in the CONSTRUCTION OF RAILWAY ROLLING STOCK. OFFICES AND WORKS, HEATH STREET SOUTH, SPRING HILL, BIRMINGHAM.

LONDON OFFICE—118, CANNON STREET, E.C.

**GREEN SLATES.** GREEN SLATES OF ANY SIZE, and of the CHOICEST COLOUR and QUALITY, can now be OBTAINED from the DOROTHEA WEST SLATE COMPANY (LIMITED), CARNARVON.

The "CHARING CROSS HOTEL," "STAR and GARTER HOTEL" (Richmond), "LONDON BRIDGE HOTEL," and many other public buildings, are covered with these elegant slates.

Orders will be executed in regular succession. Apply to Mr. THOMAS HARVEY, General Manager, 9, Segontium-terrace, Carnarvon, or 33, King-street, Chesapeake, London.

**BOWLING IRON COMPANY** BRADFORD, YORKSHIRE. BEST CRUCIBLE CAST-STEEL TYRES, AXLES, CRANK AXLES, BOILER PLATES, Also COG WHEELS, and other CASTINGS.

This company is prepared to furnish the above-mentioned articles in CAST STEEL of a very superior quality, made principally from their own well-known "BOWLING IRON."

Also BOWLING WROUGHT-IRON SOLID WELDLASS TYRES, of any size and to any section.

**BAGILL OIL COMPANY (LIMITED)** FLINT. MANUFACTURERS OF BLACK GREASE FOR COLLIERY WIRE ROPES, TRAMS, WAGONS, &c., \$5 PER TON TORCH and LAMP OIL, 1s. PER GALLON (Casks free).

LUBRICATING OIL, 1s. PER GALLON (Casks free).

TO COLLIERY PROPRIETORS. BEST CHARCOAL IRON and STEEL WIRE ROPES Also HEMP ROPES, for MINING PURPOSES.

ELLIS LEVER, WEST GORTON WORKS, MANCHESTER.

**W. F. THOMAS AND CO'S** NEW PATENT SEWING MACHINES, Producing work alike on both sides (lock-stitch).

CATALOGUES £5 : 5s. 1 and 2, CHEAPSIDE, And REGENT CIRCUS, OXFORD STREET, LONDON.

## BICKFORD'S PATENT SAFETY FUSE

Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXPOSITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1853; and at the "UNIVERSAL EXPOSITION," in Paris, 1867.



**BICKFORD, SMITH, AND CO.,** of TUCKINGMILL, CORNWALL, MANUFACTURERS OF PATENT SAFETY FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—  
EVERY COIL OF FUSE MANUFACTURED BY THEM HAS TWO SEPARATE THREADS PASSING THROUGH THE COLUMN OF GUNPOWDER, AND BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS AS THEIR TRADE MARK.

**COAL CUTTING MACHINERY.**—The WEST ARDSLEY COMPANY, having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are NOW READY TO MAKE CONTRACTS FOR THE CONSTRUCTION AND USE OF THEIR MACHINES.

The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN THE COST AND IMPROVE THE AVERAGE SIZE OF THE COAL, TO LIGHTEN THE LABOUR, and also to MODIFY THE SANITARY CONDITION OF THE MINE.

All communications to be made to Messrs. FIRTH, DONNISTHORPE, and BOWER, No. 8, Britannia-street, Leeds.

**NOTICE.**—The WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, OR USE ANY MACHINERY in the construction of which any such INFRINGEMENT IS MADE.

**NITRO-GLYCERINE, OR NOBEL'S PATENT BLASTING OIL.**—The EXPLOSIVE FORCE OF THIS BLASTING OIL IS TEN TIMES THAT OF GUNPOWDER, and the ECONOMY AND SAVING IN TIME, LABOUR, AND COST in removing granite and hard rock, in sinking shafts, driving tunnels, and opening forward in close and is immense.

It will not explode from a spark or fire, but from concussion alone, and is consequently much less dangerous than gunpowder or gun-cotton.

Being heavier than water it sinks to the bottom of a wet hole, no other tamping than water being required.

One charge of this blasting oil, which is now being used with wonderful effect in all the largest slate quarries in North Wales, will displace as much slate rock as four or five charges of gunpowder; and its great force, acting on a large quantity of good slate rock, shakes and dis-places it at the natural joints, or cracks, without damaging the slabs nearly so much as the more numerous blasts from any other blasting material would do.

This invaluable quarrying agent may now be obtained from Messrs. WHEAT and Co., Carnarvon, sole consignees from the patentee.

**DÖRING'S PATENT ENGINE FOR TUNNELLING**

MINING, QUARRYING, AND BLASTING IN OPEN CUTTING.

A SAVING OF THIRTY TO SIXTY PER CENT. in labour effected where the cost of adit exceeds £5 per fathom.

TIME FOR DRIVING ADIT REDUCED FIFTY TO SEVENTY-FIVE PER CENT.

"These drilling engines are in daily use at the zinc mines of the Vieille Montagne," &c.—*Times*, Dec. 24, 1866.

"One of these machines was shown to work in an exceedingly satisfactory manner upon hard granite."—*Engineering*, Dec. 21, 1866.

Particulars may be obtained of Mr. DÖRING, or Mr. GROVER, 30, Duke-street Westminster.

**JOHN AND EDWIN WRIGHT,**

PATENTEES. (ESTABLISHED 1770.)

MANUFACTURERS OF EVERY DESCRIPTION OF IMPROVED

PATENT FLAT AND ROUND WIRE ROPES,

From the very best quality of charcoal iron and steel wire.

PATENT FLAT AND ROUND HEMP ROPES.

SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASTE, TARPAILING, OIL SHEETS, BRATTICE CLOTHS, &c.

UNIVERSE WORKS, MILLWALL, POPLAR, LONDON.

UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM.

No. 2, OSWALD STREET, GLASGOW.

CITY OFFICE No. 5, LEADENHALL STREET, LONDON, E.C.

Swan Rope Works.

**GARNOCK, BIBBY, AND CO.,**

CHAPEL STREET, LIVERPOOL.

MANUFACTURERS OF FLAT AND ROUND HEMP AND IRON AND STEEL WIRE ROPES FOR MINING, RAILWAY, AND SHIPPING PURPOSES.

MANILLA ROPE OF SUPERIOR QUALITY, FIFTY PER CENT. STRONGER AND THIRTY PER CENT. CHEAPER than Russian hemp rope.

WIRE ROPE OF FIRST QUALITY WIRE, and the HIGHEST STANDARD OF STRENGTH.

**THOMAS TURTON AND SONS,**

MANUFACTURERS OF

CAST STEEL FOR PUNCHES, TAPS, and DIES,

TURNING TOOLS, CHISELS, &c.

CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK

AXLES, SHAFTS and

FORGINGS OF EVERY DESCRIPTION.

DOUBLE SHEAR STEEL. FILES MARKED

BLISTER STEEL. T. TURTON.

SPRING STEEL. EDGB. TOOLS MAR. ED.

GERMAN STEEL. WM. GREAVES & SON.

Locomotive Engine, Railway Carriage and Wagon

Springs and Buffers.

**SHEAF WORKS AND SPRING WORKS, SHEFFIELD,**

LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, &c.

Where the largest stock of steel, files, tools, &c., may be selected from.

**NERVOUS DEBILITY: ITS CAUSE AND CURE.**—Before seeking aid from the so-called remedies without medicine, read this valuable work on the Treatment and Cure of Nervous and Physical Debility, Loss of Appetite, Pains in the Back, Spasmodic, &c., with plain directions for Perfect Restoration to Health. Sent post free to any address, on receipt of two postage stamps. Letters of enquiry or details of case promptly answered.

Address, Dr. SMITH, 8, Burton-crescent, London, W.C.

**CURE YOURSELF BY THE PATENT SELF-ADJUSTING**

CURATIVE AND ELECTRIC BELT.—Sufferers from nervous debility, painful dreams, &c., can now cure themselves by the only guaranteed remedy in Europe, protected by Her Majesty's great seal. Free for one stamp by H. JAMES, Esq., Percy House, Bedford-square, London.

N.B.—Medicines and fees superseded.

**CONSULT DR. HAMMOND (of the Lock Hospital, &c.),**

No. 11, Charlotte-street, Bedford-square, London, W.C., in all those ailments which tend to embitter and shorten life, and especially those termed peculiar and confidential. At home, Nine to Two, and Six to Eight; Sundays, Ten to Twelve.

The "Self-Curative Guide" post free, two stamps.

N.B.—Cases of recent infection cured in two days.

**DR. WATSON (of the Lock Hospital), F.R.S., Member of the**

College of Physicians and Surgeons, on the SELF-CURE OF NERVOUS

and PHYSICAL DEBILITY, Loss of Spirit, Loss of Appetite, Timidity, In-

capacity for Exertion, &c., with means for perfect restoration. Sent free for two stamps by Dr. WATSON, No. 1, South-crescent, Bedford-square, London.

Consultations daily from 11 till 3, and 6 till 8; Sundays, 10 till 1.

Just published, post free for two stamps,

**WONDERFUL MEDICAL DISCOVERY, demonstrating the**

truces of Nervous, Mental, and Physical Debility, Loss of Spirit, Indigestion, Want of Energy, Premature Decline, with plain directions for perfect restoration to health and vigour, WITHOUT MEDICINE. Sent free on receipt of two stamps, by W. HILL, Esq., M.A., Berkeley House, South-crescent, Russell-square, London, W.C.

By post, from the author, 1s.; sealed ends, 20 stamps.

**MANHOOD: A Medical Essay on the Cause and Cure of Pre-**

mature Decline in Man, founded on the results of a successful practice of 20 years in the treatment of nervous and physical debility, sterility, impotency, effects of climate, and infection.

By J. L. CURTIS, M.D., 15, ALBEMARLE STREET, PICCADILLY.

REVIEWS OF THE WORK.

"MANHOOD.—We feel no hesitation in saying that there is no member of society by whom the book will not be found useful, whether such person hold the relation of a parent, preceptor, or clergyman."—*San Evening Paper*.

"Dr. Curtis has conferred a great boon by publishing this little work, in which is described the source of those diseases which produce decline in youth, or more frequently premature old age."—*Daily Telegraph*, March 27, 1866.

Also, from the same author, for 1s., or 16 stamps sealed,

**DR. CURTIS'S MEDICAL GUIDE TO MARRIAGE: A Prac-**

tical Treatise on its Physical and Personal Obligations. With rules for removing certain disqualifications which destroy the happiness of wedded life. Sold by ALLEN, 11, Ave Maria-lane; MANN, 39, Cornhill, London.

Consultations daily, from Ten to Three, at No. 15, Albemarle-street, Piccadilly, London, W.

## RHONDDA VALLEY, GLAMORGANSHIRE.

TO COLLIERY PROPRIETORS, CAPITALISTS, AND OTHERS.

VALUABLE COLLIERY FOR SALE.

**MR. DAVID EVANS WILL SELL, BY AUCTION,** at the New Inn, Pontypridd, on Wednesday, the 18th day of September, 1867, at Four o'clock in the afternoon, subject to such conditions of sale as shall be then produced, all that valuable COLLIERY known as the

## "LAN COLLIERY,"

Situate in the RHONDDA VALLEY, within one mile of Pontypridd, and about thirteen miles from the port of Cardiff, comprising that excellent and well-known house coal vein, known as the No. 1 vein, under the Landraw and Gelly-wion Estates, the surface of which is about 600 acres in extent, held under an advantageous lease from Messrs. Thomas, for a term of twenty-one years from the 30th day of June, 1866, subject to a moderate dead rent and royalties, with average clause, together with the colliery, will be sold.

All the trams, tram-plates, wood, colliers' tools, weighing machine, weigh house, blacksmiths' shop, blacksmiths' tools and iron, carpenters' shop, stable, storehouse, five canal boats, and other requisites for carrying on the colliery.

The horses and harness employed in the colliery will have to be taken by the purchaser at a valuation.

The colliery has some very special advantages which recommend it to the notice of purchasers. It is worked by level, and has a natural drainage, and is now in full working order. The vein is of excellent quality, and has been proved on several sides of the property. The coal is now taken from the colliery by means of Messrs. Thomas's tram-road, which passes through the towns of Pontypridd and Treforest, passing close by the Taff Vale Ironworks to Messrs. Thomas's canal, which enters the Glamorganshire Canal at Denla Lock, a point eleven miles from the Port of Cardiff. The way-leave to the Glamorganshire Canal is free.

The distance from the level to the Rhondda branch of the Taff Vale Railway is about 300 yards.

To view, apply to Mr. WILLIAM THOMAS, the overman at the colliery.

A plan of the property may be seen on application to Mr. HENRY MORRIS, Mining Surveyor, Pwllgwyn Cottage, Pontypridd.

For further particulars and copies of conditions of sale, apply to Messrs. GROVER and DAVIS, Solicitors, Cardiff; or to the Auctioneer, Pontypridd.

**SCRAESDON FORT, CORNWALL (FOUR MILES FROM PLYMOUTH).**

TO CONTRACTORS, MINE AGENTS, BUILDERS, AND OTHERS.

**MR. HENRY SENDLEY** has received instructions from the

Executors of the late Mr. George Roach, contractor, who have completed their contract, to SELL, BY AUCTION, on Tuesday, September 24, 1867, and following days, upon the Works at Scraesdon Fort, their most COMPLETE and VALUABLE CONTRACTORS'

**PLANT AND MACHINERY,**

comprising—TWO STEAM ENGINES and BOILERS; two sets of winding gear; very superior lime and mortar mills; iron and steel wire ropes, by Newall, of Gateshead; and apparatus, by Willoughby Brothers, of Plymouth, for working an incline tramway one mile long; a railway weighing machine, by Huxham and Brown, of Exeter; 160 tons of railway metals, switches, points, and crossings; 40 railway wagons and trailers.

TWO VALUABLE LINCOLNSHIRE AND OTHER HORSES, in excellent condition, with all their gear and tackle; a complete set of stable utensils; 12 dobbin and other carts; 100 wheelbarrows, planks, &c.

A POWERFUL 6 ton DERRICK CRANE, and several smaller ditto on moveable platforms; two overhead travelling winches, capable of lifting from 4 to 6 tons, with carriages, driving shafts, and trussing bars, complete, adapted to spans of from 50 to 70 feet.

Two 30 ton BARGES, with all their masts, sails, and spars, complete; a large quantity of timber, in balk, piles, and firewood; carpenters' benches; masons' quarrymen's, and complete sets of blacksmiths' tools, bellows, anvils, derrick and other chains of every description, new and old iron, steel bars, &c., &c.; also, workmen's cottages, temporary stores, engine-houses, stables and offices, workshops, &c., as now standing.

May be viewed seven days preceding the day of sale, and catalogues had of Mr. HENRY SENDLEY, the auctioneer, Ridgeway, Plympton; or of the agent, on the works; at the Royal Hotel, Globe Hotel, Chubb's Commercial Hotel, Thomas's Great Western Hotel, and the Albion Hotel, Plymouth; at the Royal Hotel, and Hawton's Crown Hotel, or at Mr. HENDON'S, printer, Devonport; and at all the principal inns throughout Devon and Cornwall.

Sale to commence each day at half-past 10 A.M. Refreshments will be on the table from 1 to 2 o'clock, after which time only to be had by ticket obtained from the auctioneer.

Mr. H. SENDLEY begs to call the particular attention of the public to the above valuable stock and materials, as the greater part has been in use only for the Scraesdon contract, and, consequently, is in first-rate working condition.

Dated 21st August, 1867.

## UPSET PRICE REDUCED.

**FOR SALE, BY PUBLIC ROUP,** within the Faculty of

Procurators' Hall, St. George's-place, Glasgow, on Wednesday, the 25th day of September, 1867, at Two o'clock in the afternoon,

**THE GARTNESS IRON AND STEEL WORKS,**

AIRDRIE, near GLASGOW, in the county of LANARK.

These works are distant about two miles from Airdrie, and a short distance from Clarkston Station, and they are in close proximity to the North British Railway. The works consist of—

First.—THE GARTNESS MALLEABLE IRONWORKS, including eighteen puddling furnaces and four mill-heating furnaces, forging and finishing rolls, with connecting machinery and plant for manufacturing merchant bars, rails, and angle iron, and driven by a horizontal high-pressure steam-engine, of 30 in. cylinder and 6 ft. stroke. There are also two patent steam hammers.

Second.—THE HIGH MOFFAT STEAM AND WATER FORGE, consisting of three puddling and three scrap-iron furnaces, with cranes, and a 3-ton patent steam hammer, capable of producing forgings of 12 tons weight. In the water forge the hammer is driven by a water-wheel, and forgings up to 20 cwt. can be easily manufactured. There is one puddling and one scrap-iron furnace, with crane and necessary plant, with a recently-erected steel melting twelve-hole furnace.

Third.—THE LOW MOFFAT FORGE, driven by water power, having a helve hammer, two scrap-iron furnaces, with a crane, and all necessary plant for manufacturing forgings up to 30 cwt.

There are thirty-eight cottages for workmen, a large store, as well as a house for a foreman and a manager's house, with stabling, outhouses, and other accommodation.

Fourth.—The whole stock of PIG-IRON, SCRAP-IRON, WOOD, TOOLS, and other effects, situate in and about the works, conformable to inventory thereof.

For further particulars as to the property and inventories of the machinery and plant, application may be made to Mr. HERBERT H. CANNAN, 8, Walsby-street, London; or to Messrs. M'GRIGOR, STEVENSON, and FLEMING, Writers, 116, St. Vincent-street, Glasgow, who will exhibit the title deeds and articles of sale.

Glasgow, August 31, 1867.

## ALSTON, CUMBERLAND.

**FOR SALE, BY PRIVATE BARGAIN, the WHOLE INTEREST**

of the present shareholders in

## BIRCHY BANK MINE.

The take extends in length 600 fathoms adjoining the Rodderupfell Mining Company's ground on the west, and in breadth 20 fathoms north of the North vein, and 20 fathoms south of the south vein.

Application to be made to Mr. JOHN FRANK, Mining Agent, Alston; or J. H. INGLEDEW, Esq., Solicitor, Dean-street, Newcastle-on-Tyne.—July 29.

## SPECIAL NOTICE.

## CLAYTON, SHUTTLEWORTH, AND CO.

At the Triennial Trials of the ROYAL AGRICULTURAL SOCIETY OF ENGLAND, held at Bury St. Edmunds, July, 1867, received the following AWARDS:—

For Single Cylinder Portable Steam Engine,—THE FIRST PRIZE OF £25.

For Double Cylinder Portable Steam Engine,—THE FIRST PRIZE OF £25.

For Horizontal Cylinder Fixed Engine,—THE FIRST PRIZE OF £20.

For Double Blast Finishing Thrashing Machine,—THE PRIZE OF £15.

Also, THE SOCIETY'S SILVER MEDAL for Adjusting Blocks for Machines.

The duty performed by all CLAYTON, SHUTTLEWORTH, and Co.'s Engines on this occasion considerably exceeded that of any others, and has never been equalled at ANY of the trials of the Society. CLAYTON, SHUTTLEWORTH, and Co. refer with pleasure to the fact that the duty of their "Commercial" or single valve engine at Chester, so long ago as 1858, was not equalled by any "ordinary" Engine at Bury.

CLAYTON, SHUTTLEWORTH, & CO., LINCOLN; and 78, LOMBARD STREET, LONDON.

## PARIS EXHIBITION, CLASS 52.

MEDAILLE D'HONNEUR.

## APPLEBY BROTHERS,

EMERSON STREET, SOUTHWARK,

LONDON, S.E.,

Engineers and Patentees of STEAM CRANES, DONKEY PUMPS, &c.,

## PATENT DONKEY PUMPS.

Ram..... 1 1/2 in..... 2 in..... 2 1/2 in..... 3 in..... 3 1/2 in..... 4 in..... 4 1/2 in..... 5 in..... 5 1/2 in..... 6 in..... 6 1/2 in..... 7 in..... 7 1/2 in..... 8 in..... 8 1/2 in..... 9 in..... 9 1/2 in..... 10 in..... 10 1/2 in..... 11 in..... 11 1/2 in..... 12 in..... 12 1/2 in..... 13 in..... 13 1/2 in..... 14 in..... 14 1/2 in..... 15 in..... 15 1/2 in..... 16 in..... 16 1/2 in..... 17 in..... 17 1/2 in..... 18 in..... 18 1/2 in..... 19 in..... 19 1/2 in..... 20 in..... 20 1/2 in..... 21 in..... 21 1/2 in..... 22 in..... 22 1/2 in..... 23 in..... 23 1/2 in..... 24 in..... 24 1/2 in..... 25 in..... 25 1/2 in..... 26 in..... 26 1/2 in..... 27 in..... 27 1/2 in..... 28 in..... 28 1/2 in..... 29 in..... 29 1/2 in..... 30 in..... 30 1/2 in..... 31 in..... 31 1/2 in..... 32 in..... 32 1/2 in..... 33 in..... 33 1/2 in..... 34 in..... 34 1/2 in..... 35 in..... 35 1/2 in..... 36 in..... 36 1/2 in..... 37 in..... 37 1/2 in..... 38 in..... 38 1/2 in..... 39 in..... 39 1/2 in..... 40 in..... 40 1/2 in..... 41 in..... 41 1/2 in..... 42 in..... 42 1/2 in..... 43 in..... 43 1/2 in..... 44 in..... 44 1/2 in..... 45 in..... 45 1/2 in..... 46 in..... 46 1/2 in..... 47 in..... 47 1/2 in..... 48 in..... 48 1/2 in..... 49 in..... 49 1/2 in..... 50 in..... 50 1/2 in..... 51 in..... 51 1/2 in..... 52 in..... 52 1/2 in..... 53 in..... 53 1/2 in..... 54 in..... 54 1/2 in..... 55 in..... 55 1/2 in..... 56 in..... 56 1/2 in..... 57 in..... 57 1/2 in..... 58 in..... 58 1/2 in..... 59 in..... 59 1/2 in..... 60 in..... 60 1/2 in..... 61 in..... 61 1/2 in..... 62 in..... 62 1/2 in..... 63 in..... 63 1/2 in..... 64 in..... 64 1/2 in..... 65 in..... 65 1/2 in..... 66 in..... 66 1/2 in..... 67 in..... 67 1/2 in..... 68 in..... 68 1/2 in..... 69 in..... 69 1/2 in..... 70 in..... 70 1/2 in..... 71 in..... 71 1/2 in..... 72 in..... 72 1/2 in..... 73 in..... 73 1/2 in..... 74 in..... 74 1/2 in..... 75 in..... 75 1/2 in..... 76 in..... 76 1/2 in..... 77 in..... 77 1/2 in..... 78 in..... 78 1/2 in..... 79 in..... 79 1/2 in..... 80 in..... 80 1/2 in..... 81 in..... 81 1/2 in..... 82 in..... 82 1/2 in..... 83 in..... 83 1/2 in..... 84 in..... 84 1/2 in..... 85 in..... 85 1/2 in..... 86 in..... 86 1/2 in..... 87 in..... 87 1/2 in..... 88 in..... 88 1/2 in..... 89 in..... 89 1/2 in..... 90 in..... 90 1/2 in..... 91 in..... 91 1/2 in..... 92 in..... 92 1/2 in..... 93 in..... 93 1/2 in..... 94 in..... 94 1/2 in..... 95 in..... 95 1/2 in..... 96 in..... 96 1/2 in..... 97 in..... 97 1/2 in..... 98 in..... 98 1/2 in..... 99 in..... 99 1/2 in..... 100 in..... 100 1/2 in..... 101 in..... 101 1/2 in..... 102 in..... 102 1/2 in..... 103 in..... 103 1/2 in..... 104 in..... 104 1/2 in..... 105 in..... 105 1/2 in..... 106 in..... 106 1/2 in..... 107 in..... 107 1/2 in..... 108 in..... 108 1/2 in..... 109 in..... 109 1/2 in..... 110 in..... 110 1/2 in..... 111 in..... 111 1/2 in..... 112 in..... 112 1/2 in..... 113 in..... 113 1/2 in..... 114 in..... 114 1/2 in..... 115 in..... 115 1/2 in..... 116 in..... 116 1/2 in..... 117 in..... 117 1/2 in..... 118 in..... 118 1/2 in..... 119 in..... 119 1/2 in..... 120 in..... 120 1/2 in..... 121 in..... 121 1/2 in..... 122 in..... 122 1/2 in..... 123 in..... 123 1/2 in..... 124 in..... 124 1/2 in..... 125 in..... 125 1/2 in..... 126 in..... 126 1/2 in..... 127 in..... 127 1/2 in..... 128 in..... 128 1/2 in..... 129 in..... 129 1/2 in..... 130 in..... 130 1/2 in..... 131 in..... 131 1/2 in..... 132 in..... 132 1/2 in..... 133 in..... 133 1/2 in..... 134 in..... 134 1/2 in..... 135 in..... 135 1/2 in..... 136 in..... 136 1/2 in..... 137 in..... 137 1/2 in..... 138 in..... 138 1/2 in..... 139 in..... 139 1/2 in..... 140 in..... 140 1/2 in..... 141 in..... 141 1/2 in..... 142 in..... 142 1/2 in..... 143 in..... 143 1/2 in..... 144 in..... 144 1/2 in..... 145 in..... 145 1/2 in..... 146 in..... 146 1/2 in..... 147 in..... 147 1/2 in..... 148 in..... 148 1/2 in..... 149 in..... 149 1/2 in..... 150 in..... 150 1/2 in..... 151 in..... 151 1/2 in..... 152 in..... 152 1/2 in..... 153 in..... 153 1/2 in..... 154 in..... 154 1/2 in..... 155 in..... 155 1/2 in..... 156 in..... 156 1/2 in..... 157 in..... 157 1/2 in..... 158 in..... 158 1/2 in..... 159 in..... 159 1/2 in..... 160 in..... 160 1/2 in..... 161 in..... 161 1/2 in..... 162 in..... 162 1/2 in..... 163 in..... 1



FIG. 1.—PATENT PORTABLE PUMPING ENGINE, WITH PUMP FIXED TO ENGINE; made in all sizes.

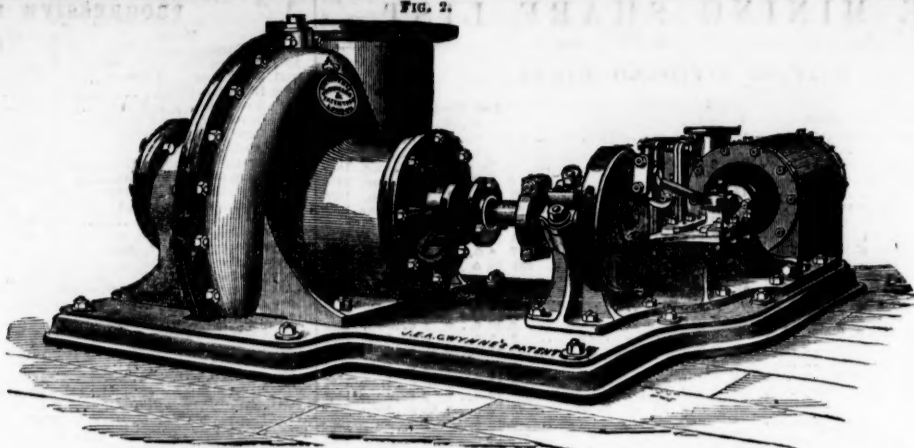


FIG. 2.—PATENT PUMPING ENGINE, FOR USE ON BOARD SHIP, COAL PITS, MINES, QUARRIES, DOCKS, CANALS, HARBOURS, &c.; FOR SURFACE CONDENSERS, PROPPELLING, &c.

## GWYNNE AND CO.'S PATENT DOUBLE-ACTION CENTRIFUGAL PUMPING MACHINERY,

FOR IRRIGATION, DRAINAGE, MANUFACTURING, AND OTHER USES.

GWYNNE AND CO. have erected the largest pumping machinery in the world; they have also erected more of all powers than any other firm in existence, and are prepared to contract that their machinery will do more work with less cost of coal than any other makers.

This Machinery has received the highest commendation; and thousands of Engineers, Manufacturers, and others using it, can be referred to in all parts of the world.

GWYNNE AND CO. HAVE RECEIVED THE FOLLOWING PRIZE MEDALS:—



FOR MANUFACTURING PURPOSES

They are largely in use; among others, by Paper Makers, Brewers, Distillers, Dyers, Chemists, Tanners, Sugar Refiners, Bleachers, Calico Printers, Carpet Manufacturers, Engineers and Iron Founders, Woollen Cloth and Blanket Manufacturers, Oil Refineries, Soap, Alkali, Salt, Starch, and Candle Works, Water Works, Lime and Cement Works, Quarries, Coal and Iron Mines, Sheep Washing, Public Baths, Cotton, Flax, Match, Felt, Oil and other Mills, &c. Numerous references to all the foregoing can be had on application.

FOR DRAINAGE WORKS

GWYNNE and Co.'s Patent Centrifugal Pumps are in very extensive use, and some of the largest tracts of land in this country, and in Holland, Italy, Austria, France, Belgium, Denmark, Demerara, &c., are kept dry by their use.

FOR IRRIGATION WORKS

They have been selected for very extensive works in Egypt, Turkey, Spain, France, Belgium, India, Ceylon, Java, China, Australia, Porto Rico, &c., &c.

FOR EMPTYING DRY OR GRAVING DOCKS

They are quite unequalled, and will be found to excel all other arrangements, discharging a body of water in proportion to the lift, the speed of engines and power remaining the same; they will empty a dock in a shorter time and with much less power than is requisite with any other system. The first cost of machinery, the erection, and the foundations and brickwork necessary, are much less expensive than with any other arrangement, and the cost of keeping in thorough working order is merely nominal.

ESTIMATES FOR ANY SITUATION FORWARDED UPON APPLICATION. LIST OF PRICES FREE, ON RECEIPT OF TWO STAMPS.

**GWYNNE AND CO., HYDRAULIC AND MECHANICAL ENGINEERS,  
ESSEX STREET WORKS, STRAND, LONDON, W.C.**

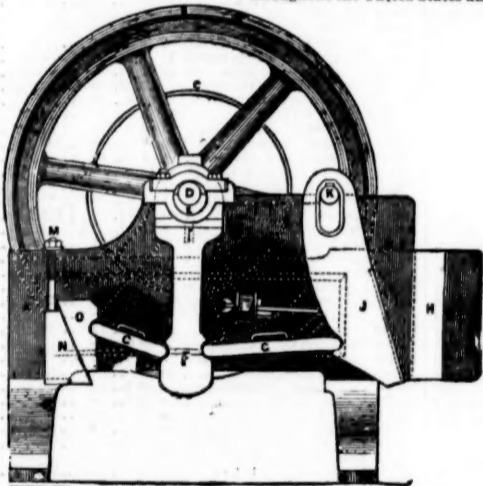
IMMENSE SAVING OF LABOUR.

TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, MCADAM ROAD MAKERS, &c., &c.

## BLAKE'S PATENT STONE BREAKER, OR ORE CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



*The Parys Mines Company, Parys Mines, near Bangor, June 6.*—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour. For the Parys Mining Company, JAMES WILLIAMS.

H. R. Marsden, Esq.

*Eaton Emery Works, Manchester.*—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaw about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery. For the Parys Mining Company, THOS. GOLDSWORTHY & SONS.

H. R. Marsden, Esq.

*Alkali Works, near Wednesbury.*—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.

*Welsh Gold Mining Company, Dolgelly.*—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

*Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust.* Messrs. ORD and MADDISON, Stone and Lime Merchants, Darlington.

*Kirkless Hall, near Wigan.*—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton. JOHN LANCASTER.

*Ovoca, Ireland.*—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

*General Fremont's Mines, California.*—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or \$75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered third machine for this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—

**H. R. MARSDEN, SOHO FOUNDRY,  
MEADOW LANE, LEEDS,  
ONLY MAKER IN THE UNITED KINGDOM.**

## THE NEW PATENT INJECTOR, FOR FEEDING BOILERS AND RAISING WATER FOR OTHER PURPOSES. BY ROYAL LETTERS PATENT, No. 1599, DATED 2d JUNE, 1866.



PRICES, DELIVERED IN LONDON:—

Size.	Ram. in.	Stroke. in.	Approx. horse-power boiler supplied.	At 100 rev.	150 rev.	200 rev. p. min.	Price.
No. 4	1 1/2	3	15	115	172	230	£10 10
5	1 3/4	3	22	180	270	360	12 12
6	2	4	30	240	360	480	14 14
7	2 1/4	4	40	345	517	690	17 0
8	2 1/2	5 1/2	55	475	712	950	19 10
9	2 3/4	6 1/2	75	585	877	1170	22 10
10	3	6 3/4	90	720	1080	1440	25 10
11	3 1/4	6 3/4	110	870	1305	1740	28 10
12	3 1/2	8	120	1030	1545	2060	31 10
14	3 3/4	8	230	2450	3675	—	40 0
16	4	8	460	4900	7350	—	55 0

\* The two last are double-acting.

Steam Regulator Valves, and also Check Valves, specially made to suit these Engines, can be supplied.

Terms Nett Cash on Delivery.

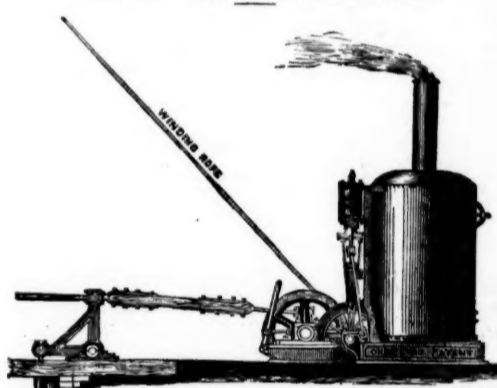
Each Injector is guaranteed to work efficiently, and any one failing to give satisfaction may be returned.

A CIRCULAR, WITH FULL EXPLANATION AND COMPARISONS, WILL BE SENT ON APPLICATION.

**BROWN, WILSON, AND CO.**

No. 80, CANNON STREET, E.C.; AND VAUXHALL IRONWORKS, S., LONDON.

Prize Medal—International Exhibition, 1862.



### CHAPLIN'S PATENT PORTABLE STEAM ENGINES, &c., FOR PUMPING AND WINDING.

These engines are SPECIALLY ADAPTED FOR PITS, QUARRIES, &c. They are EXCEEDINGLY SIMPLE in ARRANGEMENT and STRONG. NO FOUNDATION OF CHIMNEY STALK BEING NECESSARY, they can be ERECTED or REMOVED with VERY LITTLE TROUBLE or EXPENSE, and are WELL ADAPTED for HOME or FOREIGN USE.

Sizes, from 2 to 25-horse power.

STEAM CRANES, STEAM WINCHES, CONTRACTORS' LOCOMOTIVES, HOISTING ENGINES, PUMPING AND WINDING GEARING, &c.

ALEXANDER CHAPLIN AND CO.,  
CRANSTONHULL ENGINE WORKS, GLASGOW.

STRONG WIREWORK, the cross wires equally bent; also BEST STAMP GRATES, both of iron and copper, and punched copper plates; DITTO TUBED. All the above promptly supplied at W. ESCOTT'S MINING MATERIAL DEPOT, TAVISTOCK, DEVON.

**THOS PRENTICE & CO.**

**PATENT SAFETY CUN COTTON CARTRIDGES & CHARGES**

**82, GRACECHURCH ST. E.C.**

GUN COTTON

Is the safest and  
**STRONGEST  
EXPLOSIVE**  
For every description  
of  
**MINING  
AND  
QUARRYING  
WORK.**

A charge of any given size exerts six times the explosive force of gunpowder. The enormous power confined in a short length at the bottom of the hole allows of a much greater amount of work being placed before each blast, saving considerably in the labour of drilling.

Charges are made of every diameter required, the length varying with the diameter. Any number may be placed in a hole. Each charge is fully equal to one-fifth of a pound of powder.

MANUFACTURED BY  
**THOMAS PRENTICE AND CO., 82, GRACECHURCH STREET, LONDON.**  
WORKS, STOWMARKET.  
LONDON AGENT,—MR. THORNE.

## THE MINING SHARE LIST.

## BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.	
1500	Alderley Edge, c. Cheshire*	10 0 0.	—	..	8 17 8.	0 5 0.	July 1886	
200	Botalack, t. c. St. Just	91 5 0.	—	170 180	488 15 0.	5 0 0.	May 1886	
4000	Brookwood, t.	1 11 0.	—	..	0 5 0.	0 2 6.	Sept. 1886	
1000	Bronfloyd, t. Cardigan*	12 0 0.	—	..	8 7 0.	0 6 0.	Aug. 1886	
6400	Cashwell, t. Cumberland*	2 10 0.	—	..	0 1 6.	0 1 6.	Aug. 1886	
816	Cargill, s. d. Newlyn	15 5 7.	—	11 13	13 15 0.	1 0 0.	Feb. 1886	
1867	Cwm Eryn, t. Cardiganshire*	7 10 0.	—	..	23 18 0.	1 0 0.	June 1886	
128	Cwmystwith, t. Cardiganshire	60 0 0.	—	..	379 10 0.	3 0 0.	April 1886	
280	Derwent Mines, s. d. Durham	300 0 0.	—	..	174 10 0.	5 0 0.	June 1886	
1024	Devon Gt. Consols, c. Tavistock*	1 0 0.	420	415 425	1067 0 0.	7 0 0.	July 1886	
358	Dolcoath, c. t. Camborne	128 17 6.	—	..	831 10 0.	3 0 0.	Aug. 1886	
6144	East Caradon, c. St. Cleer*	2 14 6.	—	5 5 1/2	14 11 6.	0 2 0.	July 1886	
360	East Caradon, t. Cardiganshire*	32 0 0.	—	..	146 10 0.	2 0 0.	July 1886	
128	East Pool, t. c. Pool, Illogan	24 5 0.	420	..	407 10 0.	5 0 0.	July 1886	
5000	East Rosewarne, c. t. Gwinnar	2 15 0.	—	..	0 10 0.	1 6 0.	Jan. 1886	
1906	East Wheal Lovell, t. Wendron	3 9 0.	7	7 7 1/2	3 1 6.	0 6 8.	Aug. 1886	
2800	Foxdale, t. Isle of Man*	25 0 0.	—	..	70 10 0.	0 10 0.	June 1886	
5000	Frank Mills, t. Christow	3 18 6.	—	..	3 5 6.	0 5 0.	Feb. 1886	
15000	Great Laxey, t. Isle of Man*	4 0 0.	19 1/2	18 18 1/2	6 15 0.	0 10 0.	June 1886	
5908	Great Wheal Vor, t. c. Helston*	40 0 0.	17 1/2	17 1/2 18 1/2	11 13 0.	0 7 6.	June 1886	
1024	Herodsfoot, t. near Liskeard*	8 10 0.	37	35 37	42 0 0.	1 10 0.	June 1886	
6000	Hingston Down, t. Cardiganshire	5 10 0.	—	..	0 10 0.	0 5 0.	April 1886	
400	Lisburne, t. Cardiganshire	18 15 0.	—	..	492 10 0.	3 0 0.	May 1886	
9000	Marke Valley, c. Caradon	4 10 6.	5 1/2	5 1/2 5 3/8	3 1 6.	0 6 8.	Aug. 1886	
3000	Minera Boundary, t. Wrexham*	1 0 0.	—	..	0 13 0.	0 3 0.	Mar. 1886	
1800	Minera Mining Co. t. Wrexham*	25 0 0.	—	170 180	218 18 0.	6 5 0.	Aug. 1886	
20000	Mining Co. of Ireland, c. t. c.	7 0 0.	18 1/2	18 1/2	—	—	5 7 1/2	Jan. 1887
40000	Myndy Iron Ore*	3 5 0.	—	..	0 6 6.	0 2 6.	Mar. 1886	
200	Parys Mines, c. Anglesey*	60 0 0.	—	..	157 10 0.	5 0 0.	Jan. 1886	
12800	Prince of Wales, t. Calstock	12 12 6.	46 1/2	508. 522.	0 2 6.	0 2 6.	Aug. 1886	
1120	Providence, t. Uney Lelant*	10 6 7.	30	27 28	83 7 6.	0 5 0.	Feb. 1886	
512	South Caradon, c. St. Cleer*	1 5 0.	390	375 395	562 10 0.	6 0 0.	July 1886	
6000	South Darren, t. t.	3 6 6.	—	..	0 7 1.	0 1 6.	July 1886	
496	St. Wh. Frances, c. Illog. t.	18 18 9.	28	30 32 1/2	371 13 6.	1 0 0.	Sept. 1886	
508	Summer Hill, Mold	3 13 6.	—	..	0 15 0.	0 5 0.	Sept. 1886	
6000	Tincroft, c. t. Pool, Illogan	9 0 0.	13 1/2	13 1/2	18 16 0.	0 5 0.	Aug. 1886	
2000	Trumpet Cons., t. Helston	11 10 0.	—	12 13	11 12 6.	0 7 6.	Aug. 1886	
3000	W. Chiverton, t. Perranzababu	10 0 0.	65	64 66	31 7 6.	2 0 0.	Aug. 1886	
400	West Wheal Seton, c. Camborne	47 10 0.	165	130 150	476 10 0.	3 10 0.	Aug. 1886	
512	Wheal Bassett, c. Illogan	5 2 6.	70	60 70	626 0 0.	2 0 0.	Aug. 1886	
1024	Wheal Friendship, c. Tavistock	20 0 0.	—	..	300 10 0.	0 10 0.	Nov. 1886	
4235	Wheal Killy, t. St. Agnes	5 4 6.	3	..	3 1 0.	0 2 0.	Feb. 1886	
1024	Wheal Mary Ann, t. Menheniot*	8 0 0.	16	14 1/2 15 1/2	61 15 0.	0 15 0.	June 1886	
2000	Wheal Rose, c. Scornier	5 10 0.	113	110 115	1 0 0.	0 10 0.	Feb. 1886	
396	Wheal Seton, c. Camborne	58 10 0.	115	110 115	246 15 0.	2 10 0.	Aug. 1886	
1040	Wheal Trevelyan, s. d. Liskeard*	3 17 0.	8 1/2	..	54 14 6.	0 4 0.	June 1886	
3000	Whitewell Lead, Clitheroe*	5 0 0.	—	..	0 10 0.	0 10 0.	July 1886	
17000	Wicklow, c. t. Wicklow	2 10 0.	—	..	46 15 0.	1 0 0.	April 1886	

## FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Total divs.	Per share.	Last paid.
20000	Anstralian, c. South Australia*	7 7 6	—	—	0 1 0	—	Aug. 1886
15000	Cape Copper Mining*	7 0 0	7 1/2	—	2 12 6	0 10 0	April 1886
75000	Don Pedro No. del Rey, Brazil*	0 14 0	2 1/2	2 1/2	0 7 9	0 3 6	Aug. 1886
20000	Fortuna, t. Spain*	2 0 0	1 1/2	—	1 5 4	0 2 0	Oct. 1886
40000	Gen. Min. Silver, t. Helston	20 0 0	18	—	23 19 0	0 15 0	June 1886
10000	Gonessa, t. s. d. (5000 £4 pd., 5000 £4 pd.)	3 0 0	—	—	10 per cent.	—	July 1886
15000	Linares, t. Spain*	3 0 0	—	—	11 6 4	0 5 0	Jan. 1886
50000	Panuco, t. c. t.	3 0 0	—	—	10 per cent.	—	Yearly
6000	Peel River Land and Mineral*	2 10 0	—	—	0 2 6	0 2 6	Mar. 1886
30000	Pestana, s. d. t.	2 10 0	—	—	4 14 8	0 11 0	June 1886
10000	Portland, s. d. t. France*	20 0 0	—	—	0 17 6	0 1 0	Aug. 1886
100000	Port Phillip, t. c. t.	1 0 0	1 1/2	1 1/2	7 1/2 per cent.	—	Mar. 1886
120000	Scottish Australian Mining Co. t.	1 0 0	—	—	7 1/2 per cent.	—	Mar. 1886
11000	St. John del Rey, Brazil*	15 0 0	61	58 60	7 1/2 per cent.	—	Jan. 1886
50000	Victoria (London) (25000 £1 pd., 25000 £2 pd.)	1 0 0	—	—	0 19 6	0 2 6	May 1886
40000	West Canada Mining Company*	1 0 0	—	—	—	—	—

## NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Total divs.	Per share.	Last paid.
25000	Alamillos, t. Spain*	2 0 0	—	—	—	—	—
100000	Anglo-Brazilian, s. d. t.	0 10 0	—	—	—	—	—
12500	Anglo-Italian, s. d. t.	0 5 0	—	—	—	—	—
40000	Britannia Silver Lead Mines, France*	2 0 0	—	—	—	—	—
2464	Burra Burra, c. South Australia*	5 0 0	—	—	—	—	—
25000	Capula, s. d. Mexico*	1 12 0	—	—	—	—	—
30000	Chontales, c. s. Nicaragua*	4 0 0	—	—	—	—	—
12000	Cobre Copper Company, c. Cuba*	43 10 0	—	—	—	—	—
10000	Copahu Mining Company, Chile*	16 10 0	—	—	—	—	—
10000	Copahu Smelting, Chile*	10 0 0	—	—	—	—	—
300	Copper Miners' Co. of South Australia* (150 £100 pd., 150 £100 pd.)	150 470 pd.	—	—	—	—	—
15000	El Chico Silver Mining and Reduction Company*	5 0 0	—	—	—	—	—
8000	English and Canadian Mining Company*	2 0 0	—	—	—	—	—
10000	Fortune Copper Mining Co. of Western Australia*	2 0 0	—	—	—	—	—
50000	Frontino and Bolivia, c. New Granada*	1 15 0	128	—	—	—	—
10000	Great Barrier Land, Mining, &c., New Zealand	5 0 0	—	—	—	—	—
80000	Great Northern, c. South Australia*	1 11 6	—	—	—	—	—
68000	Kapunda Mining Co., Australia*	1 0 0	—	—	—	—	—
7927	Lusitania (Portugal)*	3 0 0	—	—	—	—	—
85090	Marquita	0 12 6	—	—	—	—	—
12500	Noranda Coal and Iron* (5000 £5 pd., 5000 £4 pd.)	3 10 0	—	—	—	—	—
51000	Nova Scotia Land and Gold*	1 15 0	—	—	—	—	—
15000	Otea, c. New Zealand*	2 0 0	—	—	—	—	—
10178	Rhenish Consolidated, t. (5000 £5 pd., 4178 £2 10s. pd.)	—	—	—	—	—	—
100000	Rossa Grande, t. Brazil*	0 10 0	—	—	—	—	—
15000	San Pedro del Monte, s. d. Mexico*	4 0 0	—	—	—	—	—
10000	San Roque, t. Spain	5 0 0	—	—	—	—	—
100000	Taquara, t. Brazil*	5 0 0	—	—	—	—	—
20000	Terraced, s. d. t. Isle of Sardinia	0 2 6	—	—	—	—	—
43174	United Mines, s. d. Mexico*	25 0 0	—	—	—	—	—
20000	Vancouver, s. d. t.	6 0 0	—	—	—	—	—
4000	Val Salsam, s. d. t.	7 0 0	—	—	—	—	—
45000	Victor Emanuel, t. Italy*	1 0 0	—	—	—	—	—
20000	Washoe, t.	5 0 0	—	—	—	—	—
50000	Worthing, c. South Australia*	1 0 0	—	—	—	—	—
75000	Yorke Peninsula, South Australia	1 0 0	—	—	—	—	—
40000	Yukon Matanza, c. S. A. t.	3 0 0	—	—	—	—	—

## BANKS AND FINANCIAL COMPANIES.

Shares.	Banks.	Paid.	Last Pr.	Bus. done.	Total divs.	Per share.	Last paid.
40000	Alliance*	25 0 0	—	—	13 1/2	13 1/2	—
30000	Australasian*	40 0 0	—	—	67	67	—
10000	Bank of Egypt*	25 0 0	—	—	—	—	—
50000	Bank of New Zealand*	10 0 0	—	17 19	—	—	—
25000	Bank of Otago*	10 0 0	—	—	—	—	—
20000	Bank of Victoria, Australia*	25 0 0	—	—	—	—	—
20000	British North America*	50 0 0	—	—	—	—	—
50000	Canadian Loan and Investment*	20 0 0	—	—	—	—	—
40000	Chartered Bank India, Australia, and China*	25 0 0	—	—	—	—	—
20000	Chartered Merc. of India, London and China*	25 0 0	—	—	—	—	—
50000	City*	10 0 0	—	12 13	—	—	—
20000	Colonial*	25 0 0	—	—	—	—	—
40000	Company of African Merchants*	3 0 0	—	—	—	—	—
250000	Consolidated Bank*	10 0 0	—	—	—	—	—
200000	Credit Foncier and Mobilier of England*	9 0 0	—	—	—	—	—
20000	English, Scottish, & Irish*	5 0 0	—	—	—	—	—
20000	English and Swedish*	25 0 0	—	—	—	—	—
20000	Imperial Bank*	20 0 0	—	—	—	—	—
22500	Imperial Ottoman*	10 0 0	—	—	—	—	—
300000	International Land Credit*	6 0 0	—	—	—	—	—
50000	London Chartered Bank of Australia*	20 0 0	—	—	—	—	—
37500	London and County*	20 0 0	—	—	—	—	—
40000	London Financial Association*	30 0 0	—	—	—	—	—
72000	London Joint-Stock*	30 0 0	—	—	—	—	—
5000	London and River Plate*	15 0 0	—	—	—	—	—
20000	ditto ditto New, issued at 1 1/2 prem.	10 0 0	—	—	—	—	—
20000	ditto ditto New*	10 0 0	—	—	—	—	—
10000	London and South-Western*	20 0 0	—	—	—	—	—
5000	London and Venezuela*	12 0 0	—	—	—	—	—
20000	London and Westminster*	20 0 0	—	—	—	—	—
10000	Merchant*	12 0 0	—	—	—	—	—
5000	ditto New*	25 0 0	—	—	—	—	—
17156	Metropolitan and Provincial*	20 0 0	—	—	—	—	—
5000	Midland*	20 0 0	—	—	—	—	—
20000	National of Australia*	4 0 0	—	—	—	—	—
20000	National of Liverpool*	15 0 0	—	—	—	—	—
10000	National Provincial of England*	12 0 0	—	—	—	—	—
40000	National ditto ditto 2d and 3d issue t.	42 0 0	—	—	—	—	—
50000	National ditto ditto	20 0 0	—	—	—	—	—
50000	New South Wales*	20 0 0	—	—	—	—	—
60000	Oriental Bank Corporation*	25 0 0	—	—	—	—	—
27210	Provincial Banking Corporation*	10 0 0	—	—	—	—	—
20000	Provincial of Ireland*	25 0 0	—	—	—	—	—
10000	ditto ditto New*	10 0 0	—	—	—	—	—
40000	Union of Australia*	25 0 0	—	—	—	—	—
10000	Union of Ireland*	25 0 0	—	—	—	—	—
5000	Union of London*	15 0 0	—	—	—	—	—

## PROGRESSIVE MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last call.
4000	Ballacorkish, t. of Man, t. c.	3 0 0.	—	—	Aug. 1867
3000	Bedford Unit., c. Tavistock.*	2 6 8.	—	1½ 1½	—
1031	Bedol Aur, t. Holywell	1 12 0.	—	—	May 1867
400	Billins, t. Flint.	30 0 0.	—	—	Fully pd.
1248	Boscawell, t. c. St. Just.	7 6 0.	—	—	Dec. 1866
2500	Bosworthen and Penzance.	4 0 0.	—	—	July 1867
5000	Bottle Hill, t. Plympton	1 14 0.	—	—	June, 1866
4000	Blanchdyff, s. s. l.	5 14 0.	—	—	—
200	Brynford Hall, t. Flint.	28 0 0.	—	—	Jan. 1866
5000	Bryn Gwlog, t. Flint.	0 18 0.	—	—	June, 1864
1200	Bryn Gwyn, t. Mold*	9 0 0.	—	—	—
1000	Budnyck Consols, c. t.	—	—	8s. 10s	—
5004	Bwlch Consols, s. l.	4 0 0.	—	—	—
6000	Bwadrain Consols, s. l.	3 0 0.	—	—	—
30000	Caldbeck Fells, t. Cumber.*	1 10 0.	—	—	Dec. 1860
1000	Camborne Consols, c. t.	18 10 0.	—	—	Feb. 1864
4000	Camthorn, t. s. l.	1 9 0.	—	—	July 1867
11000	Cape Cornwall, t. c. [St. Cleer 32 10s. pd., 3000 10s. pd.]	—	—	—	Oct. 1866
914	Caradon Cons., c. St. Cleer 32 13 6.	—	—	—	Aug. 1867
1000	Carn Brea, c. t. Illogan*	28 0 0.	10	7 10	May 1867
6000	Carn Camborne, c. Cambn.	2 2 0.	—	—	July 1867
5000	Carnarvonshire, t. s.	4 0 0.	—	—	Fully pd.
4005	Cardigan Cons.*	5 0 0.	—	—	July pd.
6000	Cardiganshire, t. s.	17 10 0.	—	—	Sept. 1866
2000	Carsford, t. s. l. [2000 41½ pd., 1600 41½ pd.]	—	—	—	Mar. 1865
2500	Cath Gleen, t. Flint.	2 10 0.	—	—	Aug. 1866
2500	Central Miners, t.	3 17 6.	—	—	June 1867
16000	Central Smallbeach t.	1 0 0.	—	—	Fully pd.
3000	Chiverton, t. Perranzaboo.	9 7 6.	7	6½ 7	May 1867
3000	Chiverton Moor, t. Perranz.	6 8 6.	5½.	5½ 5½	Aug. 1867
4000	Clara, t. Llywernog	2 16 6.	—	—	May 1867
2880	Clifford Amalg., c. Gwen. t.	33 17 6.	7½.	7½ 8½	June 1867
5000	Condourou, c. t. Camborne	76 10 0.	—	17 22	—
5000	Conor, c. t. W. B. [1000 10s. pd.]	—	—	—	July 1866
2450	Cook's Kitchen, c. Illogan*	19 14 0.	—	9 11	—
1024	Copper Hill, c. Redruth.	12 10 0.	—	—	June, 1866
6885	Cornish Clay and Tin	1 0 0.	—	—	Fully pd.
1055	Cradock Moor, c. St. Cleer*	12 6 0.	—	—	May 1867
861	Crane, c. Camborne.	33 9 6.	—	—	Dec. 1866
12000	Creake, c. Tavistock.	3 12 0.	—	—	June 1867
4000	Cuddra, t. St. Austell	5 5 0.	—	—	Sept. 1867
1000	Dale, t. North Stafford.	1 0 0.	—	—	Fully pd.
1000	Devon Wagon Works, t. s. l.	—	—	—	—
1024	Dev. Wh. Lopes, Bickleigh.	18 10 0.	—	—	Mar. 1867
12800	Drake Wallis, t. Calstock.	2 5 0.	—	—	Dec. 1866
565	Ding Dong, t. Gwilt.	49 14 6.	—	—	Dec. 1866
30000	Dundalk, Ireland, t.	0 15 0.	—	—	Feb. 1867
2000	Dyfnwgwm, t. Wales	13 7 0.	—	—	June, 1866
740	Eaglebrook, t.	19 15 0.	—	—	July, 1866
512	East Bassett, c. Redruth.	31 10 0.	18	19 20	July 1867
1000	East Bassett and Gwyls, t.	5 0 0.	—	—	July, 1866
1000	East Bottle Hill, t. Cambn.	—	—	—	May 1867
4096	East Brookhouse, t. Hain.	2 8 8.	—	—	July, 1866
4000	E. Carn Brea, c. Redruth.	3 15 0.	2½.	2½ 2½	—
6000	East Chiverton, t. Perranz.	2 14 3.	—	—	July 1867
4000	E. Grenville, c. Camborne.	3 9 6.	2	1½ 2	Aug. 1867
4000	E. Gunnislake & S. Bed. c.	10 10 0.	—	—	Sept. 1867
5000	East Laxey, t. Isle of Man*	2 15 0.	—	—	Dec. 1866
6000	East Neptune, c. Marazion.	—	—	1½ 1½	—
—	E. Providence, t. Uny Lel.	5 4 8.	—	—	Aug. 1867
5000	East Snaefell, t. L. Man*	—	—	—	Dec. 1864
5610	East Seton, t. L. Man*	0 13 6.	¾.	—	May 1867
5000	E. St. Just, t. s. [5000 32 10s. pd., 3000 32 10s. pd.]	—	—	—	Nov. 1866
256	East Tugus, c. Redruth	96 0 0.	—	—	April, 1866
1190	E. Wh. Agar, c. St. Cleer.	12 17 0.	—	—	Jan. 1865
5000	E. Wh. Rose Con., t. Per.*	2 0 0.	—	—	—
4000	E. Wh. Russell, Tavistock	12 5 6.	1¾.	1½ 1½	July 1867
6000	Fortescue Consols, c.	0 12 6.	—	—	Feb. 1867
—	Fowey Con. c. Tywardreath	5 4 6.	—	—	Feb. 1866
5000	Freze Hill Works, t. Bickl.	1 16 0.	—	—	Mar. 1865
6000	Furdon, t. [5000 32 10s. pd.]	—	—	—	Mar. 1865
4096	Garlandia Unit., t. Wendron	5 7 7.	—	—	Feb. 1866
6000	Gawton, c. Tavistock	3 10 6.	3	—	May 1867
6000	Gen. Min. Co. for Ireland, c.	5 10 0.	2½.	—	—
6000	Glasgow Caradon c. [3000 32 10s. pd., 10000 10s. pd.]	—	—	—	Sept. 1866
700	Goginlan, t.	12 10 0.	—	—	April 1864
6144	Gonamena, c. St. Cleer.	6 2 6.	—	—	Aug. 1867
4000	Gothic, c. t. Cardigan*	2 10 0.	—	—	Fully pd.
486	Graham, t. s. l. [1000 10s. pd.]	—	—	4 4½	—
6000	Great Cwmymys, s. l.	15 15 0.	—	—	July 1867
4096	Great Caradon, c. St. Ive.	3 15 0.	—	—	May 1867
6000	Great Chiverton, s. l.	1 0 0.	—	—	May 1867
6000	Gr. East Lovell, t. Helston	2 1 0.	—	—	Nov. 1866
6000	Great Mona, t. Isle of Man*	4 0 0.	—	—	June 1867
1000	Great North Downs, c.	6 13 0.	4½.	4½ 4½	Feb. 1867
1000	Gr. No. Laxey (Isle of Man)*	0 15 0.	—	—	July 1867
1000	Great North Tolgus, c.	10 0 0.	1½.	—	—
4000	Great Retallack, s. l. b.	2 4 0.	4½.	4½ 4½	July 1867
6000	Great South Chiverton, s. l.	7 7 6.	—	—	Aug. 1867
6000	Gr. So. Tolgus, c. Redruth.	1 4 0.	¾.	¾ ¾	June 1867
3313	Great Wheel Badmen, t.	7 17 6.	—	—	June, 1863
1798	Gr. Wh. Fortune, t. Breage	29 5 6.	—	—	July 1867
119	Great Work, t. Germoe.	100 0 0.	—	—	—
4000	Gunnislake (Clitters), t. c.	4 19 0.	—	—	April 1867
4000	Gwydyr Park, t. Llanrwst.	1 14 0.	—	—	Sept. 1867
3008	Hallenage, t. Kenwyn.	—	—	—	April 1867
5400	Harwood, t. Durnford.	0 6 0.	—	—	Sept. 1864
5000	Havan, t. Cardigan*	4 15 0.	—	—	Mar. 1866
6000	Lady Bertha, c. Tavistock	4 4 0.	—	—	May 1867
019	Leeds and St. Aubyn, t. c.	19 13 4.	—	—	Mar. 1866
160	Levant, c. t. St. Just.	10 8 1.	—	—	June, 1866
024	Llovel Consols, t.	—	—	—	—
4000	Maes-y-Safn, t.	20 0 0.	—	—	Jan. 1866
4000	Maudlin, c. Lostwithiel	4 7 0.	—	—	May, 1866
640	Middle Wales, s. l.	1 0 0.	2½.	—	Aug. 1867
024	Mount Pleasant, t. Mold	—	—	—	—
024	Nangles, t. c. Kea.	28 0 0.	—	—	May 1867
4000	Nether Heath* [5400 32 10s. pd., 6400 2s. pd.]	—	—	—	—
4000	New Birch Tor & Vitrif. t.	1 13 6.	—	—	Oct. 1866
4000	New Clifford, c. Gwennap	2 10 0.	—	—	May 1867
4000	New Cornish [12000 32 10s. pd., 12000 15s. pd.]	—	—	—	Sept. 1866
4000	N. Crow Hill, t. St. Stephen	3 3 0.	—	—	June 1867
514	New E. Russell, c. Tavistock.	0 11 6.	—	—	April, 1867
4000	New Hendra, t. c. Breage.	14 11 0.	—	—	Mar. 1866
4000	New Penrice, t. c.	7 12 3.	—	—	July 1867
755	New Treleah, c. Redruth	4 8 0.	—	—	May, 1866
2900	New Trevenen, t. Wendron	3 14 0.	—	—	Mar. 1866
729	New Wheel Lovell, t.	1 18 0.	—	—	Aug. 1867
4000	New Wh. Seton, c. Cambn.	58 10 0.	50	—	Aug. 1867
000	New Wheel Towan, c. t.	1 10 0.	—	—	July, 1866
000	North Devon, s. l.	0 17 0.	—	—	July, 1867
000	No. Dolcoath, c. Camborne.	4 3 0.	—	—	Mar. 1867
000	North Downs, c. Redruth.	5 3 10.	—	—	Sept. 1867
000	No. Grammer, c. Redruth	7 12 3.	—	—	Aug. 1867
000	North Hallenbeck, t. Kenwyn, [8000 3s. 6d. pd.]	—	—	—	July, 1865
000	North Jane, t. s. l. Kenwyn.	3 1 6.	—	—	Mar. 1867
000	North Levant, t. c. St. Just.	10 12 0.	—	—	April, 1867
000	Nth. Minera, t. Wrexham*	1 0 0.	—	—	Fully pd.
000	N. Phenix, c. Llinkinhorne	4 2 6.	—	—	May, 1867
933	North Pool, c. Illogan	5 16 0.	—	1 1½	Mar. 1867
024	North Retallack Mine	2 0 0.	—	5 5½	Feb. 1867
000	No. Rosekar, c. Camborne.	32 10 0.	4	3 5	May 1867
000	No. Shepherd, t.	6 10 0.	—	—	July 1867
936	No. Trevelick, t. St. Just.	10 0 0.	1¾.	1½ 1¾	Dec. 1860
000	North Wheel Bassett, c. th.	5 0 0.	—	—	April, 1866
610	North Wheel Croft, c. t.	3 11 3.	4½.	4 4½	July 1866
000	North Wh. Chiverton, t.	4 0 0.	4½.	4 4½	Mar. 1867
144	N. Wh. Robert, Smp. Spiney	4 8 11.	—	—	Mar. 1867
288	Okel Tor, c. Calstock	2 7 4.	—	—	Aug. 1866
000	Okehampton	1 10 0.	—	—	—
000	Old Gunnislake, c. Calstock	2 15 0.	—	—	Mar. 1867
000	Old Westmoreland, t. Bickl.	—	—	3½.	June 1867
000	Par Consols, t. St. Bleyke*	2 12 0.	—	—	July 1867
465	Pedn-an-drea, t. Redruth.	6 2 6.	—	½ ¾	May 1867
000	Pendene Consols, c. St. Just	6 7 0.	—	—	Aug. 1867
335	Penhallan Wheel Vor, t. c.	3 12 6.	—	—	July 1867
000	Penhalls, t. St. Agnes	3 0 0.	—	—	May, 1866
772	Polberro, t. St. Agnes	15 0 0.	—	—	Fully pd.
512	Polberro, t. St. Agnes	8 0 0.	—	—	Aug. 1866
000	Prince Arthur Consols, t.	2 0 0.	—	—	Fully pd.
000	Redburn, t. c. Callington	—	—	6s. 7s.	Mar. 1867
000	Reinle Laxey, t. Isle of Man*	4 0 0.	—	—	Feb. 1867
024	Rose and Chiverton Unit.	5 0 0.	6	6 6½	Nov. 1866
000	Rosecliff and Tolcarne, t.	9 0 0.	—	—	April 1867
973	Rosewarne Consols, c.	5 2 6.	—	—	Feb. 1866
915	Rosewall Hill & Ransom, c.	3 0 0.	—	—	Aug. 1866
848	Rosewarne United, c. t.	4 3 0.	—	—	June 1867
960	Shropshire Copper, c.	2 10 0.	—	—	Fully pd.
000	Saefell, t. Isle of Man*	1 0 0.	—	—	Fully pd.
400	Silver Branch, t. Germar.	10 0 0.	—	—	Aug. 1867
000	Sithney Wheel Metal, t.	4 5 0.	—	—	Oct. 1866
000	Sorridge Cons., c. Tavistock	1 14 6.	—	—	Oct. 1866
912	South Bassett, c. Gwennap.	25 10 0.	—	—	June 1867
924	South Callington, s. l.	5 17 6.	—	2 2½	Jan. 1867